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ORIGINAL ARTICLES.

A PLEA FOR THERAPEUTICS.

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This is an age of investigation. An age which might almost be called ultra-scientific. An idea or a proposition which is born to-day, must come into existence prepared to fight for its survival. It will not be taken on faith. It will not be accepted as a truth because its progenitor calls it such; but it must come stripped of all debatable factors in order to meet the stony glare of to-day's scientific judgment.

It must expect to be weighed and measured. It must be put to the test of theodolite and chain, crucible and retort, microscope and spectroscope. In fact it must while still upon the threshold of science, stand with such form and color, that of it, it may be said "This is a condition and not a theory which confronts us." This principle of delving after truth, of separating the chaff from the wheat, is not confined to *new* ideas, but is also brought to bear upon theories and corolaries which are moss-grown and hoary with age. Among the rattling of dried bones, the probing of dogmas, the shaking of faiths, and the sifting and culling which is the tendency of the hour, how can therapeutics, which as a science is manifestly far from being exact, hope to escape?

And it goes without the saying that it has not escaped. In the general onslaught which has been made along the line of battle against tradition and theory, therapeutics has certainly borne its share of the brunt of the conflict.

Of all the branches of medical science, therapeutics is to the general practitioner of paramount importance. It is his buckler and shie'd; his lance and sword. It is his means of combating disease; his key to public confidence; the bridge which is to carry him to success or failure. This being his position in relation to the subject in question, it behooves him when this his chief citadel is attacked, to examine his intrenchments in order that should any defects be found, they may be remedied and his position strengthened.

No one will undertake to argue that this branch of the science of medicine is as exact as mathematics for example.

We cannot say that given a malady, and given a remedy, the one can be applied to the other with the same certainty of result that sulphuric acid applied to zinc will yield hydrogen gas.

To say, however, that therapeutics with all the principles which it teaches is a delusion, is virtually another way of saying that the physician is an imposter. We can not believe the one without admitting the other. The medical man, therefore, who stands upon the ground of extreme skepticism as to the question of the

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treatment of disease, simply has no excuse for his existence; he puts himself upon trial for his life.

In contradistinction to the true science of our profession Trousseau has aptly called therapeutics the art of medicine; for as the mechanic's knowledge of the use of his tools is his means of carrying out his plans so is his knowledge of this art, the physician's means to a similar end. He may use the stethescope, the sphygmograph, the speculum, the urinometer, or any of the various instruments employed for precission in diagnosis, with the greatest possible skill, or he may with scalpel and microscope solve the post mortem problems which are placed before him; but his true function is to battle with and conquer disease, to face emergencies, and relieve physical distress; and this he must do, through his knowledge of the practical rather than the theoretical side of medical science.

If it could be demonstrated that the laws of health and disease were as certain in their action as the laws which govern the moments of the celestial bodies, or the laws of chemical reaction or as any other fixed physical laws, the art of therapeutics would soon become a science exact enough to please the most exacting. But unfortunately for various reasons this can not be accomplished; and the failure of therapeutics to maintain itself on the principle of quad erat demonstrandum has been unavoidably the means of dividing the profession into two great classes.

First:—The physician *par excellence*: the man who recognizing the importance of the fact that a medical man should be well informed in a general way, that he should appreciate the importance of a knowledge of the science of medicine, also knows it to be equally desirable that he should be a consciencious and skillful practitioner; and he knows that it is quite within the possibilities to be the one without being the other. His armamentarum is not extensive. He employs only those measures which he has found to be worthy of his confidence, and if he adopts a new agent of therapy, it must come to his notice very well recommended. He is conservative in the sense that conservatism does not interfere with progress. As his experience increases, so increases his usefulness. Each day in his busy life has marked an epoch in his accumulation of practical knowledge. Each day has made his weapons of offense and defense sharper and more available in that warfare in which he is so constantly employed.

Second:—The skeptic: This class is represented by the man who has a lofty idea that he only has talked face to face with Truth, has held her by the hand and enjoyed her utmost confidence. He takes the ground of extreme incredulity. He repudiates the entire system. He practices medicine because there is nothing else for him to do, trusts to the recuperative powers of Nature and sits quietly down and waits. If, however, his goddess smiles upon him, as she has occasionally been known to do, he coolly pockets his fee just as if he had something to do with the result himself.

Another class might be added, viz:—The empiric. The man who does not know the why or the wherefore, and does not care to learn. He generally employs the quassi proprietary concoctions that are sown broadcast over the land, and reads with avidity the accompanying pamphlets which describe in glowing terms the wonderful results obtained from this or that uterine alterative or nervine. Thus it may readily be seen that in our search for the factors which are causes for the elusiveness of the principles of therapeutics, the first fact confronts us is that as the perfection of a piece of mechanical work will vary with the man who uses the saw and plane, the square and plumb, so also will the results of the practice of our art, sometimes vary with the person who directs the remedies and agents in their application to disease. Another of the causes which may lead to disappointment in therapeutics is the failure of the medical man to recognize the difference in the susceptibility to drugs which obtains in different individuals. A resume of some well known facts in this connection, perhaps, would not be out of place. For example, I know a man who is influenced by one-sixteenth of a grain of morphia sulphate as much as the average human being is by one-quarter of a grain; and until this was discovered it was supposed he could not take the drug with safety. Another patient, a woman, who came under my notice after the administration of one-half a grain of morphia hypodermically, became comatose, pupils contracted and respirations ran down to four per minute; her condition was cer-

tainly one of extreme gravity, and was the cause of much anxiety on the part of her medical attendant. I am glad to say however that the patient recovered. Every physician knows that no definite law can be formulated as to the amount of quinine which will be necessary to break the paroxysms of intermittent fever, and yet we all know that if this drug is exhibited judiciously the result can be counted upon with almost mathematical certainty. So also in the use of bichloride of mercury and potassium iodide for the treatment of syphilis; who can say in a given case to what extent these agents will have to be carried and yet we know them to be worthy of our confidence. Chloral Hydrate, the bromides, sulfonal, and many other hypnotics are notably varying in their effects upon different individuals, yet these drugs seldom disappoint us when the proper dose is found. Strychnia is a remedy which has proved itself simply invaluable in various abnormal conditions of the heart, notably in valvular disease with a feeble systole and general lowering of blood pressure. In a rather extended experience with this drug in this class of cases, I have found the most varying susceptibility, necessitating the employment of doses of different sizes in order to obtain the result desired.

As in different individuals we find different degrees of sensitiveness to the effects of drugs, so also do we find that to produce certain results entirely different remedies will be required in different cases. Because tr. chloride of iron was beneficial in the case of A, who was anæmic, is no reason why it should be the most advantagious remedy for B.; perhaps iron by hydrogen or the sulphate, or the Pyrophosphate, or some other form of iron would act much more satisfactorily in the latter case.

Digitalis, the usefulness of which as a remedy cannot be questioned, can sometimes with profit be superceeded by convalaria; this fact is most pronounced in those cases in which digitalis is not well borne by an irritable stomach; convalaria is frequently much better tolerated. Nitro-glycerin and strophanthus which can be employed with advantage in many cases are plainly far from being satisfactory in others. The value of resorcin in the treatment of various gastric disorders, notably in chronic gastritis was first pointed out by Dr. Mackay in a paper read before the British Medical Association, in August 1886, and later by Dr. Wm. H. Thompson, in a paper read at the annual meeting of the New York County Medical Society, in November, 1892. This drug is certainly a most valuable agent, but an occasional case will be found where by its employment no appreciable effect can be produced. Dr. Thompson himself claims out of seventy-eight cases, fifty-one successes, twenty-one failures and six doubtful.

Out of fifteen cases treated by myself with this drug, which cases included gastric catarrh and acute and chronic catarrhal derangements of the small intestines, I can justly claim two-thirds of bona fide cures.

Necessarily a certain amount of experimentation will occasionally have to be indulged in, that the best means to an end may be found. The physician, however, should be quick to read the signs as to whether he is doing his best for his patient, and judiciously change his remedies when he thinks it can be done with advantage.

One point which will bear mentioning is the too general practice of prescribing drugs with no clear idea as to what is expected of them. Perhaps the hurry of a busy professional life, or the fear that the patient will demand that something be done for him, or the wish to gain time to study the case, or habitual carelessness, or even gross ignorance on the part of the medical man, will be the cause of a habit of loose prescribing; that is to say, with no conception as to the meaning of the symptoms presented, or at the most with only a hazy idea of a diagnosis, remedial measure will be recommended, and a line of treatment instituted with not the faintest conception as to what is to be accomplished, but only a fond hope that by a hit or miss process, a satisfactory result will somehow be obtained. Hence if the physician can not lucidly explain to himself *why* a remedy is given, it had much better not be given at all; or if he must prescribe on these lines, let him for the credit of his art, embrace the theory of high potency, so that his remedies may at least do no harm. Again the personality of the patient may sometimes be the cause of failure in therapeusis. This may be owing to impatience, to vacillation, or to a want of frankness, or

to stupidity in stating the case for consideration. A patient who is markedly neurasthenic will sometimes by a combination of these characteristics, make the life of his medical man a burden to him. There seems to be an undefinable antagonism between a physician and an occasional patient which influences to a marked degree the desired result. Perhaps this statement verges on the visionary, but such a condition I am sure not infrequently occurs.

One of the most important causes for the comparatively slow advancement of therapeutics lies in the fact that other branches of medicine promise more eclat to their disciples. The specialties demand larger fees and insure more public prominence. Surgery in all its special departments is notably alluring to the ambitious medical man. There is something which approaches the heroic in handling glittering knives and causing blood to flow. The every day experiences, the routine work of the general practitioner is a part of a life of usefulness, but it lacks the luster and stir, the applause and rewards of the other departments, and therefore while the science of medicine has enjoyed the advantage of having its achievements constantly recorded and heralded to an expectant world, the more unostentatious triumphs in the realm of true therapeutics have often represented the unrecorded private knowledge of individuals, the personal experience of quiet practitioners which passed into oblivion when the possessor ceased to exist.

Thus I have tried to demonstrate briefly, that while victory does not always perch upon our banner, it is not necessarily because therapeutics is a delusion and a snare, but because the art is continually hampered by conditions which tend to prevent its substantial advancement.

If I have underestimated the *science* of medicine, its institutes, its theories, it has been unintentional; for to not fully appreciate that which has rescued the profession from the darkness of superstition, would be virtually a confession of stupidity. Fothergill has said, "That some should declaim against theory, is no more than that an eunuch should inveigh against lechery; it is the chastity of impotence." The science of medicine is the foundation upon which the art must rest; and the foundation must be improved and strengthened in order to securely support the superstructure.

But let us not neglect the part of the building which is above the ground; the part which must be as a refuge to those who expect us to aid them. They do not see the solid masses of masonry, the iron girders, the braces and general perfection of the subterranean portion, but they judge of the entire building by the part which meets their view.

They do not estimate their medical man by any such standard as his knowledge of the pathology and remote consequences of regurgitation at the inetral orifice, but if by a possession of this knowledge, he is the better enabled to bring to them relief, then is he exhibiting attributes which they can fully comprehend and appreciate.

That the art has fallen behind the science in the struggle towards perfection, is manifest to any careful observer; and with the general practitioner, more than with the specialist, rests the future of therapeutics. With the country practitioner, perhaps, most of all, the man who has been scornfully called the cross-roads doctor, lies the power of retaining the art in a position of public confidence and trust. Because he must be a man of expedients; he must face emergencies of every grade, often single handed, and entirely cut off from professional council and assistance. He learns to choose his therapeutic measures with judgment, for he must have only those in his armamentarum which can be used with precision and profit.

He can also afford to be honest with his patients. Not being surrounded by the bustle and professional rivalry of the large cities he can advise them carefully and candidly as what is to their best interest, and not as is the fashion of the hour, place them on his medical Pegasus and fly with them through mystical labyrinths of gynecology, neurology and several other learned ologies, representing the entire internal and external structure of the human organism.

And as to Nazareth was once given the key to an important crisis in human affairs, so also may truth which occasionally lurks in strange places, some time in the golden future be found to have existed during all these years even in places remote from the hallowed precincts of the great medical centers.

PATHOLOGY OF CANCER.*

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The essential histological elements of cancer consist of various forms of cells of epithelial character. These cells constitute larger or smaller spherical or elongated masses in the alveolar or interstitial spaces of the part in which they grow. Accompanying the growth of these cells and the continuous penetration of them into such spaces, is an increase, more or less proportionate, of the fibrous tissue stroma.

In many cases the new tissue is evidently an inflammatory hyperplasia produced by the irritating invasion of the epithelium. In other cases or forms, the stroma and vessels therein appear to be of new embryonic formation, and while not of due proportion, as in surrounding tissues, yet not bearing evidence of inflammatory origin.

Medullary encephaloid and the glandular varieties belonging to this latter group, and scirrhous and epithelioma to the former. The cells filling the alveoli, to a greater or less degree, resemble normal epithelial forms found on such surfaces, or in such masses where the growth originated. Conditions of rapid growth, of age, of degenerative changes and of pressure, determines the shape, size and other attributes of the cells.

If the theory, or rather hypothesis of Cohnheim, that tumors arise from the inclusion of embryonic cells or collections of cells, which after complete evolution of the tissues are by some stimulus excited to growth and development, unrestrained and undirected by co-ordinate or co-operative growth and development of the whole, —if this be true, and it seems not improbable, then the embryonic cells or bits of tissue from which the carcinomata arise, must have undergone evolution up to the stage of differentiation of the germinal layers. In fact, this must be true also of all tumor pathogenesis except perhaps for the so-called "dermoid cysts."

For leaving out these last, we find no abstractly heterologous tumors; but, those of mesoblastic character taking rise from tissue of mesoblastic origin, and the epithelial form hypo and epiblastic sites only.

What a matter of interest, perhaps of conjecture only, to look down along the path of tissue evolution, and see where nature's emigration train has, unnoticed, dropped the undeveloped, imperfect seed here and there along the way, to lie unseen, perchance to spring into luxuriant and noxious growth long afterwards.

Away down in the scale of development, probably from among the mass of cells having common and undifferentiated potencies, before the germinal layers had begun to form, was left aside from the current of evolution's tide, a cell or two, from these we get all sorts of tissues, epithelial and mesoblastic, in the "dermoid cyst."

Further up where the ways divide, we have the separation into three classes of cells, and across the line our growth cannot pass, but just this side of the line we have those abandoned orphans of nature who have all the possibilities of the mesoblast in its infancy. Here the sarcomata spring up; and so on, coming down to those which must have been passed by just before the final completion of tissue, to give rise to tumors much like normal forms. Curiously enough, we get no true nervous tissue tumor growth except in "dermoids" and the sustentacular tissue neuroglair gliomata.

So, these cancerous tumors also show their ancestral traits, for not only do they arise from epithelial structures solely, but they exhibit in morphology a similarity, more or less distinctly expressed, to the epithelium of the organ or surface in which their parent cell was included. Thus, the epitheliomata of epidermic origin have more or less aquamous cells, as also the more massive and even semi-columnar ones, which show degenerative changes similar to stratum corneum, lucidum and the malpighian layer. Cells like those in concentric nests and "pearls," staining like similar cells in stratum lucidum and corneum.

Those of internal passages of hypoblastic derivation have cells of columnar form with other distorted shapes. So also those of glandular site, present forms similar to

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those of the mature gland, or to those of general embryonic gland forms.

The development of normal cells, from the óösperm through all its progeny up to the fully matured individual living organism show a purposive tendency, a disposition even through many metamorphoses to arrive at definite and orderly complexity and differentiation. And, if abortive and monstrous forms occur, they are from interrupted and incomplete development, or some diversion of evolution into long obsolete but primeval paths. That is to say, however diverse the outcome of development may be, from that which now constitutes the complete and perfected structures or organism, the resultant parts or whole, show the attempt of the injured, hindered or exuberant cell to develop along the lines, and to the ends shaped by ancestral environment.

Therefore, we are justified in believing that these pathological forms are attempts of the aroused embryonic cell (hitherto latent), to produce something which it might have completed, had it gone on in tissue construction aided and restrained by its fellows.

Of epithelial tumor construction we have at the extreme two classes, one which is nearer maturity in embryonic ancestry, and, therefore, the main line—the benign adenomata, which frequently in its more perfect forms, rather closely resembles normal glands in structure and function—that is, producing something resembling some of the glandular secretions.

These may be set down as the epithelial analogues of the more mature varieties of mesoblastic tumor formation—the benign fibro-lipo-, chondro-, osteo-, myomata, etc. At the other extreme are the carcinomata; these are for the most part made up, as previously stated, of masses of epithelioid cells, penetrating into the subjacent tissues.

These may be classed as of the "cadet," line, which left the train of evolution farther back, and not having received the directing and restraining impress of orderly development and association as late as the other class, produce more aberrant forms. These are analogous to the malignant mesoblastic tumors—those embryonic and immature-featured sarcomata.

In the sarcomata we recognize the mesoblastic tissue tendencies, as much as in those of maturer and more stable development. So it seems to me we may recognize in the carcinomata the tendency of gland production, even though lacking most essentials of the adult organs.

Epiblastic glands are developed by the ingrowth of solid cylinders of epithelial cells, which branch and ramify, or remain more simple, with formation of lumen in ducts and acini by separation or degenerative solution and mingling in first secretion, further there is formed the specialized limiting basement membrane, continuous with that which lies beneath the malpighian layer, and upon the vascular corium.

In hypoblastic gland evolution, in some cases the same process obtains, but many of the glands are produced by tubular involutions of the mesenteron with subsequent specialization of cells into gland epithelium.

These invaginations may remain as simple tubular glands or become complex. The adenomata originate in the same manner, and some of them having lumina with cystic exaggeration, while others persist as solid cylinders of epithelium.

As before said, the more perfect the approximation to normal type, the more benign their characteristics. But these epithelial new growths are not all benign, many of them having a distinctly glandular appearance, being quite malignant.

Now, these go over toward the border line of carcinomata, and not only is there a shading off of the adenomata and carcinomata toward each other in qualities, but also in optical appearances.

And this insensible graduation goes on clear through the epithelial tumor growths, from one extreme to the other. At the extreme of carcinomata, we have an attempt at the production of gland tissue, but it reaches only the earlier embryonic stage in that line of evolution, that is, the ingrowth of epithelial or epitheloid cells in alveolar or cylindrical masses, without orderly arrangement, the formation of lumen or membrana propria.

While the most embryonic of sarcomas, those consisting of granulation cell elements, are recognized as abortive attempts at connective tissue construction, these epithelial ingrowths have been classed as "anomalous" instead of being denominated as of the type of "embryonic adenomatous tissue" tumors. For such they properly should be.

The general arrangement of cancerous growths and the cell peculiarities have, without a doubt, something of ontogenous impress; that is, are influenced in this way by the characteristics of contiguous structures. We see this quite markedly in the sarcomata, which take on pigmentary, or reticular, or alveolar form, if growing near or into structures having these qualities. Nevertheless, the phylogenous influence, or that of ancestral cell acquirement is the major one, for these growths never pass over the line which has differentiated the mesoblastic from the epithelial, thus exemplifying the laws of the "instability of the homogeneous" and "of increasing heterogenity" long ago recognized by Von Baer and Herbert Spencer. For though we find many examples of tumors taking on appearances in greater or less mimicry of contiguous tissues, we have every year more convincing evidence that the invasion of tumors by peripheral extension or embolic implantation in tissues of a specifically different class, has no effect to render its histogenesis other than that produced by that of ancestral or phylogenous impress.

The primary site of cancer, remote from some glandular structure, is in the nature of things almost an impossibility, except perhaps, those arising from the so-called endothelial surfaces of the serous body-cavities. So that the phylogenous influences in cancer are not so readily distinguishable from those strictly ontogenous.

In tumors of mesoblastic type it is, in very many cases, much more readily observed, for while many are decidedly homeotopic and heterotopic forms are perhaps quite as frequent.

The lymph-adenomatous structure, and the pigmented varieties of sarcomata, when originating in or near normal tissues having such features, are undoubted examples of local influence. Growths of fat, fibrous tissue, muscle, etc., in like normal tissue sites, are probably examples of late developmental interruption of the cells of origin.

Hererotopic growths as of bone, cartilage, fat and muscle, whether benign (and therefore of more mature type), or malignant, (and therefore more embryonic) necessarily must be interpreted as exhibiting some directing influence other than that of contiguous normal tissues.

Microscopical investigations in histology, embryology, and pathology, have demonstrated that in pathogenesis, as in normal histogenesis, there is, we may say, a determinate effort toward orderly and definite development. But the immediate cell ancestors of cancer growth, as of other neoplasms, lack the restraining and co-ordinating impress of the later stages of tissue evolution. The necessary exuberance, of growth and deficient stability, as well as the time of appearance, verifying for this much at least, the aphorism of Virchow, that "disease processes consist in excess, or deficiency, or being at the wrong time, or the wrong place."

The Value of Boiled Milk as an Article of Diet.

Every practitioner of medicine knows that in the treatment of certain cases of diarrhœa, where an absolute milk diet is required better results follow the use of boiled milk than of raw milk, and for this reason it has become a popular idea among the laity and members of the profession that cooked milk is the more digestible. However this may be in clinical experience, it is certain that experimental research dose not justify this conclusion. Ten years ago the late Dr. Randolph, of Philadelphia, made an interesting series of experiments to determine this point. A number of men in perfect heath were given raw milk to drink; an equal number, equally healthy, were given a similar quantity of boiled milk. An equal time after the ingestion of the liquid a hypodemic injection of apomorphine was administered to each, and a careful examina tion made of the vomited matters to determine how far the process of digestion had proceeded. In every instance it was found that the raw milk was more digested than the cooked, and as Randolph grahpically expressed it, "We obtained proof that in making milk, nature made that compound most easy of digestion."

The experiments of Crolas on the other hand, seem to point to a different result, for he believes as a result of his studies that boiling has no action whatever on the casein or lactose, and removes from the liquid a small quantity of butter, which is entangled with the film of albumin which forms on the surface of the milk. He also thinks that boiling increases the quantity of the free soluble phosphates, and concludes, in opposition to the studies of Randolph, that boiled milk is equivalent, if not superior, to raw milk.

CHRONIC OTORRHŒA—ITS SIGNIFICANCE AND TREATMENT.

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Some one has said that the eye is "the window of the soul." and I feel justified in extending the metaphor by saying that the organ of hearing is the portal to our most sentient nature, It is true that the eye makes us cognizant of the beauties of nature—its mountains, its vales—its rivulets and oceans—its Autumn leaves with their myriads of tints, but it is equally true that the organ of hearing puts us into communication with the outer world by a sense even so subtle as that of sight; it causes a weird trance of immagination, filling the soul often with the sublimest ecstasy, causing us to burst forth in admiration for the words of the imortal Poet who said,

> "The man who hath no music in his soul
> Nor is not moved by concord of sweet sound
> Is fit for treason, strategem and spoils."

How necessary is it then, not only from a sentimental view as the above but also from one more practical, that we should endeavor by proper hygienic measures and, as far as possible, by the proper treatment, to preserve the integrity of the organ of hearing.

My object in presenting this paper is not for the purpose of going into the intricate pathology of this morbid process nor to bring forward any new and startling facts in its treatment, but in a practical manner to refresh the minds of those whose privilege it has not been to keep pace with the rapid advances of otology, and, at the same time, to incorporate some ideas gained from personal clinical experiences.

Otorrhœa etymologically means a discharge from the ear, but by common acceptation of the term it is usually understood as referring to a chronic running from the external auditory meatus dependent upon a morbid state of the tympanic cavity. Every discharge from the ear has its source and its distinctive cause which must be thoroughly ascertained before one can ever hope to treat successfully this class of troubles, for he who uses ear douches at random, or swabs out the ear in the same manner will often come to grief, and such can never hope to rise to that prominence in his chosen profession which comes by exactness and knowledge of the subject, coupled with a large amount of common sense. In teaching at the Southern Medical College my habit has been to divide all chronic discharges from the ear as having their origin either in the external or middle ear.

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CHRONIC DISCHARGES FROM THE EXTERNAL AUDITORY MEATUS.

(*a*) Discharges which usually occur in some portion of the human economy arise almost without exception from cavities lined by mucous membranes, and hence it looks quite anomalous that a discharge should arise from the external auditory canal which is nothing but a dermoid surface. That such is the case no one can doubt who has ever had much clinical work in ear diseases. Sir Joseph Toynbee, in his work on Diseases of the Ear, published in 1860, enumerates many cases of pathological conditions of the external canal where one of its most common symptoms is a discharge from these parts. Sebaceous, sweat and ceruminous glands are abundantly scattered in the dermoid layer of the canal and there only needs an irritative factor in any form to produce a hyperæmia and congestion of the parts to be followed by a milky discharge. One of the most frequent causes of this symptom is is a moist eczema of the canal and closely allied to the same, as far as treatment is concerned, is the pathological condition known as otymycosis, depending upon the presence of certain parasites for the production of this morbid state. The symptoms of the two conditions are much the same. On looking into the external auditory canal one will observe a wet, soggy condition of the parts, flakes of moistoned epithelium like blotting paper clinging to the walls and in addition, a turbid discharge exuding from the canal. Such a condition is not infrequently met with, hence it behooves the physician to be ever on the alert for the true diagnosis, since by the proper applications the parts can soon be restored to their normal condition.

The treatment consists in syringing the canal at the first sitting with a warm solution of biborate of soda, cleaning the canal with a small curette, drying thoroughly the parts with cotton and then ap-

plying your medicament. This latter is best done by ointments or powders. One of the best is a dram from each of Boric and Salicylic acid to half an ounce of vaseline. This should be applied once a day, to be followed by insufflations of Boric acid powder. With the subsidence of the symptoms the number of applications can be gradually decreased.

(*b*) *Polypi and Foreign Bodies.*

By the presence of such bodies as these the whole canal through irritation, becomes congested and with this hyperæmic condition there is an increase of the glandular secretion in this part. The discharge is sometimes very copious but differs from that which comes from the tympanic cavity in being more watery and whitish in appearance.

The only treatment in such cases as these is the removal of all foreign and offending substances. Polypi are best removed with the cold wire snare and their base afterwards treated with chronic acid applications. If the growth is too small for the snare, then a small ring curette can be used.

DISCHARGES ORIGINATING FROM AND DEPENDENT UPON PATHOLOGICAL CONDITIONS OF THE MIDDLE EAR OR ITS CONTIGUOUS CAVITIES.

Let us refresh ourselves for a moment with the anatomy of the parts. The tympanic cavity is situated within the hardest bone of the body, communicating with the throat through the eustachion tube, with the antrum mastoideus through the aditus antrum, while its outer wall is limited by the membrana tympani. It is lined throughout by mucus membrane, being continuous with that of the communicating cavities, and is traversed by a chain of three small ossicles. Two of these ossicles, the malleus and incus, are in close contact with the inner surface of the drum membrane, while the greater portion of their heads and bodies are situated high up in the atic of the tympanum. It is these two ossicles which have taken such a prominent part for the last few years in producing chronic discharges which had remained incurable until the necrosed ossicles had been entirely removed. Every case of chronic middle ear discharge can trace its origin to an acute otitis media, but why some of these acute cases recover without any untoward result while others leave their mark in the shape of a chronic discharge, are questions which have not been satisfactorily answered. Certain it is that the condition of the general system, the question of blood and lymphatic dyscrasiæ play an important *rôle*. We must also bear in mind the fact that a chronic discharge from the tympanic cavity can be either *simple* or *purulent* in character, and in this way greatly influencing us in our prognosis.

For convenience sake, I have classified chronic discharges from the middle ear as occurring in (1) Childhood, (2) Adults.

CAUSES.

(*a*) Children in whom there is a scrofulous or syphilitic taint are the ones most liable to chronic discharges from the ear, discharges from the nose, and to certain forms of ocular troubles, such as phlyctenular and interstitial keratitis. It is just in these cases that the systematic constitutional treatment produces its most beneficial results.

(*b*) The acute infections and contagious diseases, especially scarlet fever and measles, are frequently followed by a chronic otorrhœa as one of their sequelæ. In fact, statistics show that the majority of patients who suffer with a chronic discharge from the ear can trace its origin to an attack of measles or scarlet fever.

(*c*) Post-nasal adenoids, enlarged tonsils and chronic naso-pharyngeal catarrh are frequent causes and exciting agents in keeping up this condition through the connection of the middle ear and pharynx by means of the eustachian tube.

Most frequently adult patients who suffer with a chronic otorrhœa from the tympanic cavity, can trace its origin to some period of their childhood. That the same factors which acted as causes in childhood may also exist later in life is evident, but on account of the enlarging of the various parts and the greater power of resistence in the tissues of the adult, they are not so liable to the same disturbing influences. It is equally true that a certain amount of pathological condition existing in the naso-pharynx, in the way of adenoids, hypertrophies, chronic catarrh, etc., will not always answer as the cause of a chronic middle ear discharge, and we must look for some inherent condition existing in the middle ear itself as a cause for the persis-

tency of the discharge. I have frequently seen all pathological conditions of the naso-pharynx relieved and yet therewould persist an occasional discharge from the ear. That there is a close relationship, however, existing between these parts, all must admit, and he who ignores the nasal and naco-pharyngeal morbid states will never make a successful otologist.

When a chronic catarrhal condition of the middle ear has existed for some time, the mucous membrane and its contiguous parts are apt to be transformed into such a pathological state as to be themselves the exciting cause of the same. When we remember that, with the exception of the outer wall, the middle ear is a cavity enclosed in hard bone, and the nutrition of its lining mucous membrane is very easily interfered with, we are not surprised at the pathological conditions which we often find.

Among the first must be mentioned granulations upon the mucous membrane, which, as long as they exist will be a source for the production of a chronic discharge. Almost without exception in a chronic middle-ear catarrh there exists a perforation of the drum membrane, through which the discharge escapes; otherwise its only exit would be through the aditus ad antrum, or through the thin plate of bone which separates the tympanum from the brain,—a result, not, as Shakespeare says, "devoutly to be wished." Now with this secretion in the tympanum, it matters little how bland it is, one readily sees what a ready entrance is afforded to the various micrococci which will convert it into a purulent form.

Next in frequency must be mentioned polypi springing from the mucous membrane of the middle ear. These abnormal growths may be so small as to resemble granulations, or they may be so large as to protrude from the external auditory meatus. Usually they are by no means limited to one variety. Finally, a cause which of late has been recognized by otologists, as playing a prominent part in persistent purulent discharges from the tympanic cavity. This consists in a necrosis of some part of the bony walls of the tympanum, or of the chain of ossicles traversing the same.

TREATMENT.

Painstaking research into the history of every case; the correlation and comparison of all phenomena; a thorough knowledge of the normal and abnormal appearances of the parts, coupled with sufficient clinical experience, are necessary for the successful treatment of all ear diseases. Though but an atom as compared with the whole human frame, the field of otology is broadening every day, while the literature upon the ear alone would nearly fill an ordinary book-case. Certainly there is no brighter outlook in all the realm of medicine than is shown in the advances made in the surgery of the middle ear. While there may be extremists (they exist everywhere), yet with the conservatism which is being manifested and the large amount of clinical experience which is being added daily to the literature of the subject, we may hope for yet more brilliant results.

Every pathological condition must have its cause and, though we may not be always able to trace it, it is our duty and our professional gain to go thoroughly into the history of every case to determine, if possible, its *fons et origio*. For instance, the large majority of children who suffer with a chronic otorrhœa are also afflicted with some constitutional dyscrasia, hence it is only by the combination of the internal and topical applications that we can hope to bring about the most satisfactory results.

It is not my purpose to discuss the internal medication, for that can properly be left to the good judgment of every physician, but to go into the local management of these chronic discharges from the middle ear. Were I limited to one word as the foundation stone for the successful treatment of this class of diseases, it would be, *cleanliness*. Every secretion which remains blocked up in any cavity is a continual source of irritation and the cause of pathological changes, hence it should always be removed.

The treatment in children and in adults differs but little, save that in the former the parts are more delicate, smaller and, in some degree, less accessible. Whenever the discharge is active and very profuse, especially in children, the secretion must be frequently removed by syringing the ear with some antiseptic solution. The best in my hands has been a saturated solution of boraic acid. In very young children instruct the parents or nurse to use a soft rubber Davidson's ear syringe; in this way the parts will not be injured should the child grow obstreperous. The

physician himself should see the patient every other day, directing the nurse not to syringe the ear before coming to the office, in order that he may see any changes in the character and amount of the discharge. Having cleansed the ear himself by thoroughly syringing, the physician should dry the parts with cotton. If there exists a good-sized perforation in the drum membrane, the middle ear should be carefully inspected. In babies this is very difficult, so that occasionally one has to be content with the following procedure, which thus far has been eminently satisfactory to me. After syringing and drying the parts, the external canal is filled with pure listerine which is allowed to remain for five minutes, when the parts are again dried with cotton. The deep portion of the canal is now insufflated with powdered boraic acid, the canal packed with iodoform gauze, its inner extremity having been dipped into iodo-carbolized glycerine while its outer extremity is left accessible for removal by the nurse. The nurse is instructed to remove the packing as soon as it becomes saturated with the discharge, and to again use frequent syringings with the boric acid solution. This method of treatment is repeated every other day at first, and then at longer intervals. Having treated a number of chronic otorrhœas in children and babies by this procedure, I have found it by far the most successful in the large majority of cases.

In adults the parts are more accessible and likewise the pathological changes found more multiform. With this class of patients I find that the daily treatment by the physician himself, if possible, is much more successful, and the time much shortened, than by allowing the patient to carry on the treatment at home, which, in the large majority of cases, is very unsatisfactory. If the perforation is large and in the lower half of the drum, the line of treatment recommended for children can be successfully used in these cases. Frequently, however, the perforation exists in the upper part of the drum and is very small in size. In such cases it is usually found that the discharge comes from the attic of the middle ear, and for the successful removal of the same the solution must be introduced by means of a syringe or pipette of very slender and delicate proportions through the small opening in the drum.

As a rule, when there has been a discharge for years, the whole or the greater part of the drum membrane is entirely destroyed. In such cases there usually exists some pathological condition of the mucous membrane of the middle ear or some necrosis of the bony frame-work. Red, papillary granulations most frequently occur. These must be removed before one can hope to cure the discharge, as likewise must polypi, which, as a rule, are only overgrowth of the granulations. The best way to remove the former is by cutting, and the latter either by the cold snare or the ring curette. With the removal of these pathological growths the middle ear must be continually treated with the antiseptic powders, combined with tamponning of the auditory canal with iodo-carbolized gauze.

If, as often happens, the patient is of such a neurotic temperament that instrumental manipulation in the ear is out of the question, we may use what is termed the "alcohol treatment," instituted and recommended by Prof. Politzer, of Vienna. This consists in the instillation of absolute alcohol into the middle ear, allowing it to remain for ten minutes at a time, to be repeated, at first, two or three times daily, and gradually diminished. At first the patient may not be able to endure more than a 50 per cent. solution, but this can gradually be increased until the full strength is easily borne. I have seen most excellent results from this method of treatment, granulations disappear, polypi shrivel up and the whole ear reach a healthy state.

Finally comes a cause which of late has been found to play such a prominent part in keeping up a chronic discharge that has not yielded to the ordinary methods of treatment. This pathological condition is found to consist in a necrosis of some of the ossicles or of the bony walls of the middle ear, which, so long as it persists, will ever remain an exciting cause. Necrosis has been found most frequently in some portion of the malleus or incus, and since the greater parts of these ossicles lie in the attic of the tympanum, one more readily suspects such a pathological condition when the discharge comes through a small perforation in the upper part of the drum. The diagnosis of necrotic bone is ascertained by means of the probe, and when such is discovered there is but one course to pursue and that is the radical operation of removal.

COMMUNICATIONS.

CROUP AND DIPHTHERIA. *

B. H. DETWEILER, M. D., WILLIAMSPORT.

Mr. President, Ladies and Gentlemen: The pathology and treatment of membranous croup has been encroached upon by bacteriologists to such an extent that to is no longer considered a disease, *sui generis*, but only an exudate, the result in diphtheria caused by the Klebs-Loeffler bacillus. Dr. Wilson, in his exhaustive article on Laryngitis, in the Theory and Practice of Medicine, Pepper, 1894, says: "So overwhelming is the preponderance of the unquestionably diphtheric cases, that many competent observers regard all cases as that of nature—an extreme view that finds ample justification in the fact that no criteria have yet been established by which the differential diagnosis between diphtheritic pseudo-membranous laryngitis and the so-called non-contagious membranous croup of the dualist can be made by the clinician during life, or by the pathologist after death, save only by the presence or absence in the exudate of the Klebs-Loeffler bacillus. In both the symptoms are same, the course and termination of the attack are not different. "Physicians who look upon every case of pseudo-membranous laryngitis as a probable case of diphtheria, enjoy the practical advantage of erring; if err, they do upon the safe side."

The celebrated Drs. White and Keen, in their late surgery, endorse the same theory. Were the theory correct in practice, the course of the physician would be clear; but to the older physician the demonstration of the unity of these two diseases is not as yet complete. They are two distinct diseases; membranous croup was one of our terrible diseases, blanching the cheek of every mother upon the slightest whistling cough of her darlings, before the more dreaded name of diphtheria was a household word. In 1856, I saw my first case of membranous croup, and it proved fatal. In 1858, the first case of diphtheria came under my observation, which then became epidemic.

The course of these diseases was widely different, but when the larynx became involved, their termination was the same—death. Dr. O'Dwyer says that one child in ten, with well marked symptoms of laryngeal diphtheria recovers under medical treatment—Dr. Wilson says under all forms of treatment the mortality ranges from 60 to 80 per cent., and that all cases should be treated alike, as for diphtheria. It is the fact of this large mortality which I especially wish to press upon your consideration.

I do not consider it necessary to call your attention to the anatomical construction of the larynx, nor the distribution of the squamous epithelium upon the lining tissues of the pharynx and mouth, and the ciliated upon the vocal cords; nor that these epithelial cells determine whether the exudation be croupous or diphtheric. This is the point that should be fully considered, and upon which the duality of these diseases depends.

Dr. Wilson says, "ciliated exudation is termed croupous and squamous diphtheric; hence, the German pathologists, are correct in speaking of this process as a croupous diphtheric inflammation." Croupous inflammation is in all cases the exudation that involves the vocal cords from their anatomical construction, or ciliated instead of squamous epithelium. If this exudation be exposed to the Klebs-Loeffler bacillus, there is no question of the attack being diphtheria; but should it be simply inflammation of the vocal cords, why not treat it as any other inflammation? Why wait till the exudation becomes formed; if diphtheric, the mortality is so great that it is almost hopeless? and if not, why allow this exudate to become so firm that it is equally hopeless?

The cause of death is mechanical obstruction in one case, and in the other, mechanical obstruction with septic poisoning, due to specific microbes. The patient will be a croupy child—probably its second night with a harsh, rough cough and high fever. The preceeding night it

* Read before the Medical Society of the State of Pennsylvania, 1894.

had a few paroxysms of croup, was restless, with some fever; during the day it was apparently well. There is no exudation in the throat and nose, nor any enlarged cervical or submaxillary glands. This is a case of acute laryngitis of childhood; but in the morning you find instead of convalescence, a short hacking cough with continued fever, and you are not so sure of your diagnosis. If there are bacilli of Klebs-Loeffler in the trachea below the point of observation, the child will die; but if the thickening of the vocal cords by this croupous exudation is simply inflammatory, why not treat it as for inflammation?

Twelve hours will determine whether you can restore the child to its mother's arms or have it die the slow death of strangulation, or modified by the happy intubation of O'Dwyer with its record of decimation. It is cyanosed—breathing with the clavicular space indrawn and its throat clasped with its tiny hands to avert strangulation. You place two or three leeches on the larynx with ¼ grain doses of calomel every half hour till the characteristic spinach stools are voided; after full depletion of four or five hours, you check the bleeding points, apply a blister, and the cough will diminish, the cyanosis disappear, and in a couple of days the child will be convalescent.

During this treatment, inhalation of steam with lime water will be grateful and curative. The first case that I treated in this manner was in 1867. The distinguished physician who called me in consultation stated the case was hopeless, and said that the boy must die. He was two years old. As a dernier resort, I applied two leeches, and in five hours applied a blister. He convalesced rapidly. I have had many such cases in these years—one especially, when the consulting physician insisted on tracheotomy, but after depletion, neither intubation nor tracheotomy were required. Another, when I saw the boy of two years at 6 p. m. on the evening of the second day, after a croupy night. At 9 the same evening I found him cyanosed—and so much oppressed, they could not hold him in his crib. I applied two leeches, and followed it by a blister. In 48 hours he was convalescent.

Should this exudate, even, be diphtheria located below the point of observation, the child may recover, but will probably die—as the treatment beyond the abstraction of blood is what is considered proper by many who pride themselves on their success in treating this terribly fatal disease; but if it is not surely diphtheria, and there is a bare possibility of it being a croupous exudation on the vocal cords, why not use the depleting and revulsive treatment, instead of relying upon the treatment that has a standard mortality of 60 to 80 per cent., and rely upon removing the immediate danger of strangulation by intubation or trachetomy? I select my cases, and in doing so, have not lost a single case of membranous croup, nor have had an intubation.

My mortuary record of diphtheritic exudation extending into the larnyx, is no better than my compeers. I am persuaded it is of importance that the recognition of the duality of these diseases be made early, and that it is not good practice to err, if err they do, by treating all cases of croup on the so-called safe side of diphtheria with its terrible mortality record, and that it is the duty of every practitioner to diagnose *early* every case of croup; if diphtheritic, treat it accordingly; if membranous, give it the advantage of depletion and revulsives, by the prompt administration of calomel in quarter grain doses, every half hour, till the characteristic spinach stools are secured; inhalation of steam from lime water, which dissolves the croupous exudate upon the vocal cords, which causes the disease; and prompt depletion for four or five hours by leeching, and followed immediately by a cantharidal blister, which treatment will result in certain and speedy cure. Without the help of intubation or tracheotomy, I have followed this course since 1867 without the loss of a single patient.

Phthisis.

Professor Bouchard prescribes:

℞ Beech-wood creasote..... 5j
Balsam of tolu..... 5i¼
Terebinthine..... gr. xv
Benzoic acid..... q. s.

M. Make into 80 pills, and let 10 pills be taken daily.

Or,

℞ Beech-wood creasote..... ℥iss
Codliver-oil..... Oi¼

—*Prescription.*

Leg Ulcers.

℞ Zinc oxide.....
Gelatin..... ...āā 20 parts
Glycerin.....
Distilled water..... ...āā 80 parts

—*La Med. Mod.*

THE MEDICAL AND SURGICAL REPORTER

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SATURDAY, AUGUST 25, 1894.

EDITORIAL.

THE PHYSICIAN IN THE EYE OF THE LAW.

From the first appearance of the physician and surgeon's sign on his office front until he rounds out his professional career, he is confronted by embarrassments. The sense of the meagerness of his knowledge, and its inadequacy to meet and settle satisfactorily the many intricate and perplexing problems inseparable from his science and art, grows rather than diminishes with added experience. All his days are anxious days, the more anxious if he is fortunate in the possession of a quick, enlightened, professional conscience, feels and acts in his work as if it was something more than a mere vocation; a consecration to the gravest and most responsible form of life service, instead of being something routine and merely mechanical.

Not least of the embarrassments, annoyances and perils which continually threaten the physician and surgeon, no matter what his education, skill and eminence may be, nor the length of his successful professional services, is prosecution in law courts for malpractice. The prosecution may be in criminal form, or what passes under the misnomer of a *civil* suit —or both.

The criminal is the less frequent by reason of the difficulties and risks involved, and for the further reason that in such cases the commonwealth, in the name of public interest and safety, is made a party.

For those prosecuted for wilful mischief the profession has no sympathy. It is only by the strong hand of the law that impostors—those who usurp the honored title of physician or surgeon—can be weeded out, and the ignorant and innocent protected from the impostures of the quack.

With the civil suit the profession has most concern. These are much too common, and however they may result, are always damaging to their victim, causing loss of time, annoyance, the payment of heavy fees, and not infrequently the besmirching of a worthy and honored professional name. The motives usually behind and prompting these civil suits are malice and cupidity, and not infrequently can be seen the stealthy, filthy, cowardly

hand of one who masquerades under the title of physician and surgeon. We have before urged through these columns that these causeless prosecutions can be largely faced down by a united and healthy sentiment of common professional brotherhood. The great body of the profession has no reason to fear the severest judicial scrutiny of its work and its results.

Those who pass through our best technical schools, in education and skill measure up to the criterion judicially established. The law too, is progressive, keeps pace with changed conditions and wisely increases rather than relaxes its requirements.

The trend of the high court decisions is to force the profession to keep abreast with the advances in medical science and art.

One of the most learned and eminent of Pennsylvania's jurists, in a Supreme Court opinion, clearly defines the legal obligations of the profession. He says:—"The law has no allowance for quackery. It demands qualification in the profession practiced. Not extraordinary skill, such as only few men of rare genius and endowment possess, but that degree which ordinarily characterizes the profession. And in judging of this degree of skill in a given case, regard is to be had to the advanced state of the profession at the time. Discoveries in the natural sciences for the last half century have exerted a sensible influence on all the learned professions, but especially on that of medicine, where the circle of truths has been relatively much enlarged. And besides, there has been positive progress in that profession resulting from the studies, the experiments and the diversified practice of its profession. The patient is entitled to the benefit of these increased lights. The physician or surgeon who assumes to exercise the healing art is bound to be up to these improvements of the day. The standard of ordinary skill is on the advance, and he who would not be found wanting, must apply humbly with all diligence to the most accredited sources of knowledge."

This opinion must be recognized as sound in its logic. And, as expressed by an Associate Judge, "It is important to the interests of society that the profession intrusted with the preservation of the health and lives of the community should be held to a strict rule of accountability. Men of true science will not object to this. They court investigation. But the incompetent practitioner and the designing empiric 'love darkness rather than light,' and the sooner they are driven by judicial scrutiny into other pursuits for which they are better qualified and where they can do much less mischief, the better for the public welfare. But it is equally important that professional services should be fairly treated, and that the skill and worth receive the protection of the law."

From these decisions and others, the correct rule would appear to be that physicians and surgeons must keep abreast of the times, and make use of the latest and most improved methods and appliances, having regard to the locality and general practice of the profession.

The locality in which a physician or surgeon resides is to be taken into account. One practicing in a small town or sparcely settled country district, is not expected to exercise the care and skill of one residing in and having the opportunity afforded by a large city. He is bound to exercise the average degree of skill possessed by the profession in such localities generally.

These judicial conclusions are founded upon good reasoning. Physicians remote from cities, though well informed in theory, are seldom called upon to perform difficult operations in surgery, and do not enjoy the greater opportunities of daily observation and practice which large cities afford. So the standard of skill may differ according to circumstances and locality. But it must be noted that the

tendency of our courts generally is to elevate the standard of learning and skill required for the practice of medicine and surgery, and they are growing to instruct juries in estimating what qualifications are necessary to consider the average skill, learning and experience of the profession, properly so called—that is of well educated medical practitioners and exclusive of quacks and mountebanks.

If the physician has the skill and does not apply it, he is guilty of neglect. If he does not possess it, he is liable for want of it. The essence of the contract is that he is to do his best; to give to the use and service of his patient his best knowledge, skill and judgment; that he will use reasonable and ordinary care and diligence in the exercise of his skill and the application of his knowledge, to accomplish the purpose for which he is employed. He is not responsible for want of success in his treatment, unless it is proved to result from want of ordinary care, or ordinary skill and judgment. The degree of care to be required in cases varies with the character and exigencies of the cases. He does not contract for extraordinary care, or extraordinary diligence anymore than he does for uncommon skill. The words, reasonable and ordinary are judicially used as equivalent words, and applied in their common acceptation. In the implied contract to exert his skill and apply his diligence and care, he contracts to use his best judgment. He is, however, responsible for disregard of the well settled principles of medical science—he cannot interpose his own judgment to that which is settled except at his own peril. This dictum has been carried too far, however, by some of our courts. Many old forms and methods of treatment, both in medicine and surgery have been pushed aside by science and a more extended experience. Our knowledge has been greatly advanced by men devoting themselves to separate branches of the profession.

Precedent does not amount to so much in medicine and surgery, as in law. Medicine has less veneration for old and clumsy methods, effete formulas—for forms of treatment which, if not positively mischievous and dangerous, are useless. In medicine it is no longer as the fathers testified but as the best tests of science testify. Within the generation of which we are part, the profession has grown away from what was the practice and almost general law of the profession, that of reckless and indiscriminate bleeding; they no longer deny cooling drinks to fever patients, as was almost universally the case thirty years ago. It is fearful to contemplate what penalty the poor physician would have suffered who thirty years ago would have had the *ignorance, the want of skill and care,* or the temerity to experiment by giving a fever stricken law judge a glass of ice water.

There is yet another dictum laid down in court decisions which makes medical and surgical experiment penal and renders the physician and surgeon liable for civil damages. It would be interesting and of inestimable value to the profession to have some learned jurist define what constitutes *experiment* in medicine and surgery. There is not a drug prescribed, nor any form of applications of the knife that did not begin as an experiment. Everything, from Government down, that blesses civilized society, that heals, relieves suffering, mitigates hard human conditions, sustains human hope and enhances man's happiness had its beginning in experiment, not *reckless, but thoughtful, sober, rational experiment.*

The much that has been and is being accomplished by the medical and surgical profession is but feebly prophetic of the possible. The word is, *go on,* and the law will helpfully keep step. There are many matters, both in medicine and surgery yet to be determined by experiment, and the law will recognize that there is no larger

or more promising field of progress and one not to be bounded or limited by judical decision. The statute to be wise must always respond to human need.

All medical practice is based upon certain theories, these theories are constantly undergoing modifications under a changing and better light. Many an old hypothesis through the force of its absurdity has been pushed to the wall. The effort of modern teaching is to remove medical and surgical theories as far as possible from all error. In late years the changes in operative appliances and methods have been numerous, and both medicine and surgery have grown more and more to be affairs of science. The processes of this growth are infinite—the end will never be reached.

In general the law does not look upon the physician and surgeon with distrust or judge his work and its results with an illiberal spirit. The law recognizes the doubts and uncertainties which surround the medical and surgical practitioner, and that the errors and mistakes to which he is unavoidably exposed may well furnish a satisfactory explanation of unfavorable results, that cases of sickness and accident apparently similar, may yet be rendered substantially different by seemingly slight circumstances easily overlooked and sometimes of difficult detection.

In surgery, aside from the mere matters of manipulation or method, the courts recognize that a surgeon has to contend with very many powerful and hidden influences, such as the habits, hereditary tendencies, vital force, mental state, and local circumstances of the patient, it excuses errors of judgment when not so gross as to be inconsistent with reasonable skill and diligence.

Care is an important element in all cases, it implies the use of such watchfulness and precaution as is fairly commensurate with the danger to be avoided, judged by the standard of common prudence and experience. All will admit that the scrutiny of the law cannot be too severe where the issues of life and death are involved, but there should be justice to the physician—wisdom and an enlightened justice should hold the scales.

ABSTRACTS.

SOME REMARKS CONCERNING MERCURIC BROMIDE OF GOLD AND ARSENIC, WITH ESPECIAL REFERENCE TO ITS USE IN THE TREATMENT OF NEUROTIC CONDITIONS OF SPECIFIC ORIGIN.

[ABSTRACT]

THOMAS HUNT STUCKY, M. D,* Louisville, Ky.

At a recent meeting of this society, I had occasion to mention the use of the bromide of gold and arsenic in epilepsy. Being, comparatively speaking, a new drug to this market, it was thought of sufficient interest to bring it more prominently before the fellows.

The solution of mercuric bromide of gold and arsenic after the formula of Dr. Barclay, of Pittsburgh, is of a beautiful red color, does not deposit, odorless, and tasteless; dosage ranging from five to twenty drops, each drop containing 1.32 of a grain of gold, 1.16 of a grain of arsenic, and 1.32 of a grain of mercury salts. It does not disagree with the stomach, nor relax the bowels. It will produce ptyalism, yet with less recession

* Professor of Theory and Practice of Medicine and Clinical Med., Hospital College of Medicine.

of the gums than is produced by mercury or the iodides.

Dr. Wood, in his admirable paper, read at the meeting of the Mississippi Valley Medical Association, in Indianapolis, laid great stress upon its efficacy in diseases termed scleroses, incipient phthisis, arthritis deformans, in syphilitic diseases in its various forms, in hemiplegias, etc.

I have the pleasure of exhibiting three cases to-night, and a record of eight others, all of whom, with one exception, belong to the neuroses.

Case 1.—No. 436 of my college clinical records; diagnosis hemiplegia. W. O. M. æt. 28, married; residence, Denver, Colorado; family history, fairly good; occupation, proprietor of theatre. Habits: had used alcoholic beverages rather freely for five years. February 28, 1893, following a two-days drunk, patient vomited with great straining; passed into unconsciousness lasting seventy-two hours; complete dextra-hemiplegia, ataxia, aphasia sinistra-hemiplegia supervened. December 2, 1893, patient presented himself at clinic, having complete paralysis of the right side, could not count fingers with left eye; tongue on protrusion, pointing sharply to the right; corners of the mouth greatly depressed on right side; arm on the right side could scarcely be lifted away from the body; leg dragged after the patient in characteristic manner; all reflexes greatly exaggerated. Patient could answer yes and no to questions, but could not tell where he lived, and had to be brought to the college. Was placed on liq. arsenic et hydrarg. iodide, five drops in a wine glass of water, after meals.

December 6th, was given the mercuric bromide of gold and arsenic in five drops, doses after meals.

December 9th, patient developed la grippe, treatment was discontinued, and acetanilide given.

December 13th, condition improved, and mercuric bromide of gold and arsenic was given again.

December 20th, some improvement, medicine continued.

January 3, 1894, dose increased to ten drops.

January 26th, patient answers all questions with comparative ease, came to the clinic by himself, can lift his arm as high as his shoulder, the characteristic tremor taking place when he attempts to raise it still higher, can walk tolerably well; treatment continued.

February 7th, continued improvement.

February 14th, eating and sleeping as good as before attack.

February 28th, steady improvement in gait and speech.

March 10th, doing well.

March 17th, dose increased one drop every other day.

March 21st, has regained self confidence.

April 4th, walks miles, does not have to use cane, no longer drags his foot. Secondary contraction of a slight degree has taken place in the fingers only. Students not familiar with the case could not detect any depression at an angle of the mouth. Sight in left eye much improved, though outer half is still impaired. Tongue points nearly in the median line. Patient steadily improving.

Case 2.—J. R. æt. 35, tobacconist; personal and family history good; he has never had syphilis nor rheumatism. His trouble began about eighteen months ago, with the characteristic pains in the lower extremities. These pains were felt at irregular intervals, sometimes daily and sometimes not for a space of a week or ten days. A short time afterward he noticed the change in gait. He also had frequent attacks of sick headache, three or four seminal emissions weekly, and difficulty in holding the urine. These symptoms ceased about four months ago, but the ataxia has greatly increased, and the pains still continue. He has noticed in the last three or four months a decline in the sexual power. He was admitted into the Hospital February 1st, 1894. The skin, reflexes and the knee jerk were normal; there were no sensory symptoms; he had the Argyll-Robertson pupil; coordination was so imperfect that he was unable to stand with the eyes closed, and the feet together; and he could hardly make his way from one place to another.

In treating this case I started February 28th, with eight drops of the mercuric bromide of gold and arsenic three times a day. From March 14th to April 1st, the dose was increased one drop each day. The total quantity given during thirty-three days being 1,245 drops, an average of thirteen drops at each dose.

Case 3.—W, P. æt. 32, painter; personal and family history good. His illness

dates back to February first, 1892, the symptoms being constipation, difficulty in voiding urine, stiffness and soreness in the knees. In a short time the legs became useless. In six weeks he was about on crutches, being at the time under treatment at Hot Springs. He entered the Hospital July 7th, 1892; at that time there was very little sensation in the left leg, the condition of the right being about normal. He had incontinence of urine and feces.

Commencing February 7th, I gave him five drops of the mercuric bromide of gold and arsenic after meals; the dose was increased daily until eleven drops were being given, making the average dose given during the course, of ten drops, thrice daily. Bladder and bowel symptoms restored.

Case 4.—Mr. S. (I will refer to this case briefly, not being able to get the patient to come here tonight.) There was loss of sensation in right side of face; difficulty in co-ordination; ptosis; chronic constipation; loss of bladder control: reflexes lost. Four months treatment followed by complete relief.

It could hardly be coincident that such decided changes for the better, should have occurred in so short a time.

There have been and are now many preparations on the market which are not solutions of bromide of gold and arsenic, but bromide of gold with hydrobromic acid, arsenic acid, and arsenious acid. In the Annual of the Universal Medical Sciences issue 1891, Dr. Hare in his article on Experimental Therapeutics concludes in reference to the action of bromide of gold:

(1) Bromide of gold undoubtedly inhibits the cortical motor centres, even when administered in small doses than other bromides. After an internal administration of bromide of gold in the dose of 1½, to 3, 1-10 grs. to the kilogramme of the animal's weight, even the strongest and very prolonged electric stimulation of the cortex fails to bring about any epileptic seizures. To obtain the same result from bromide of potassium, the latter should be introduced in the dose of 9½, to 10¾ grs. to kilogramme. While bromide of iodium should be given in still larger quantities.

(2) Irritability of individual motor centres as determined by the appearance of contractions in corresponding muscular groups is depressed by bromide of gold in but trifling degree.

(3) Excitability of the white substance of the motor region remains intact.

(4) The drug seems to affect mainly the tracts of communication between individual motor centres, as well as between remote areas of the cerebral cortex.

(5) It does not appear to possess any special cumulative action. This action cannot be due to the amount of bromide present therein, since it is in the weakest (55 per cent. by weight) of the three, white bromide of sodium is the heaviest (77.7 per cent.) the potassic salts standing midway.

In the Annual of the Universal Medical Sciences, year 1892, an authority states "Better results can probably be obtained if the drug be given hypodermatically."

The opinion as to the efficacy of gold in disease has been indeed varied: In an article Med. Rec. Vol. 34, page 802, September, 1888, this appears—referring to article on gold and arsenic—"It is highly digestible," while farther on this startling statement appears,—"There is probably not a sound clinical observation, showing that gold possesses any special therapeutic efficacy in any disease."

The old therapeutists limit its field of usefulness. Bartholow speaks most highly of it, recommending the double chloride in waning sexual force, in granular and fibrous kidney, in melancholia, in atonic dyspepsia, catarrh of bile ducts, etc. The claim made that it produces auric fever has not been observed, nor have I seen any evidences of gastric irritation. In a case of syphilitic nodules with marked cephalagia, there was a rapid subsidence of the nodes and relief of the head, by the mercuric bromide of gold and arsenic, proving clearly that there is a most decidedly alterative influence exerted.

The fact that the sedation produced by the bromide of gold is greater than that by the salts of potash and soda, should give it a front rank in the treatment of epilepsy, fortified by the alterative influence of the gold and the tonic effect of the arsenic. It has long been recognized that arsenic is the treatment for chorea. In three cases of this disease treated by bromide of gold and arsenic, the results were all that could be desired.

The solution of gold as prepared by Johnson & Johnson:

1st.—Increase the appetite.

2nd.—Do not irritate the stomach nor disturb the bowels, seeming to stimulate peristalsis without sufficient irritation to produce purgation.

3rd.—Do exert decided powers of alteration, sedation where there is irritation, yet stimulation to waning powers.

4th.—Are indicated in the majority of diseases affecting coördination.

5th.—In fact, entitled to a trial in all neuroses.

SOCIETY REPORTS.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

April 6, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

GALL-STONES.

Dr. A. M. Vance: I would like to show three or four little specimens of gall-stones removed from a woman twenty-six years of age with the history of acute pain, and beginning sepsis with a tumor low in the abdomen. The gall-bladder was found very much enlarged, filled with mucus and subsequently quite a quantity of pus came from the deeper parts of the sac. The diagnosis was not made absolutely before the incision, though after the woman was on the table the consensus of opinion of those present was that the trouble was the gall bladder. I also show you several specimens from a patient operated upon some years ago. The case was similar to the one I have just reported, and my only object in mentioning it is to show the different character of the calculi.

I do not believe there were any gall-stones in the cystic duct, since excessive flow of bile has occurred so soon. The obstruction was probably inflammatory rather than from stones. A great deal of bile came away at the forty-eighth hour. The woman has made an uninterrupted convalescence.

DISCUSSION.

Dr. Wm. Bailey: In the last case reported by Dr. Vance the difficulty in diagnosis was considerable I have no doubt; from the tension of the muscle on that side it was difficult to define, but after she was under the anæsthetic it was possible to make a more accurate conclusion as to where the tumor really was. However the incision on account of the uncertainty was a little high for the appendix and a little low for the gall bladder. It was really a compromise. If there had been a positive diagnosis the incision would have been properly made, and Dr. Vance could have more readily explored the opening of the cystic duct into the gall bladder, but from the position of the incision without enlarging it too much, he was not able to reach so as to thoroughly explore the cystic duct. I think it probable as Dr. Vance has said that the duct was closed by inflamatory processes and not by gall stones. The intensity of the pain was not such as to indicate the presence of gall stones in the cystic duct, but rather from an accumulation and inflamatory process that was going on in the gall bladder.

Dr. T. H. Stucky read a paper entitled:

SOME REMARKS CONCERNING MERCURIC BROMIDE OF GOLD AND ARSENIC, WITH ESPECIAL REFERENCE TO ITS USE IN THE TREATMENT NEUROTIC CONDITIONS OF SPECIFIC ORIGIN.

(See page 257).

DISCUSSION.

Dr. A. M. Vance: In the third case shown was there any history of lead colic?

Dr. T. H. Stucky: The patient gives no history of lead colic.

Dr. S. G. Dabney: I saw the fourth case referred to by Dr. Stucky; there was complete paralysis of the motor oculi nerve. The gentleman of course had ptosis, and there was also some protrusion

of the eye ball. At the time I saw him there were also some symptoms of beginning locomotor ataxia not very marked at that time but perhaps developed later. I have no doubt the agent mentioned by Dr. Stucky is valuable in many cases, but I have in mind cases similar to those he reports that recovered under large doses of the iodides. Two were cases of complete paralysis of the motor oculi nerve which made a good recovery. One of them was a woman who also showed some symptoms of locomotor ataxia. I wish Dr. Stucky had been more explicit in his remarks concerning Hemianopia in the first case he reported. I presume it means half vision of each eye, i. e. one half the field of vision of each eye is lost.

Dr. Stucky will recall a case of this kind occurring in a lady that we saw some time ago, who had paralysis, and well-defined hemiopia. She finally recovered from the paralysis, but the half sight remained the same. Dr. Hays will also remember a similar case; the patient was a man who had no well-defined paralysis, but had a great many cerebral symptoms and a clearly defined case of hemiopia. The other symptoms have all gradually improved, but the half sight remains exactly as it was. This symptom of hemiopia may be due to disease of the optic nerve tract, or it may be due to a lesion of the cortex of the brain. As a rule it is not improved even when the other nervous symptoms disappear. When paralysis for instance disappears, the heminopia as a rule remains. It is not a frequent symptom and I think it rather peculiar that I have seen two or three cases in my experience in Louisville. I remember having heard one of the occulists here, whose experience is larger than mine, say that he had not seen a single one.

Dr. Wm. Cheatham: I think Dr. Stucky's cases are all too recent to show what effect his treatment is going to have, except in the third case where improvement has been so marked. I would not be inclined to attribute the improvement entirely to the remedy. Especially in locomotor ataxia it is about as uncertain as in epilepsy when you are going to have improvement, and whether this improvement comes from the remedy. I have seen cases where the eye muscles were involved in locomotor ataxia and the patients have gotten apparently well so far as the eyes are concerned without any treatment. We all know that locomotor ataxia has periods of rest, especially in the early stages of the disease and where the eye muscles only are involved, these cases often apparently completely recover without any treatment. I call to mind now the case of an army officer who afterward went east and I took him to see Dr. Hammond, also Dr. Knapp, who diagnosed locomotor ataxia. This man at one time went four years between attacks. He had double vision, and sometimes complete ptosis. He had specific, locomotor ataxia. The next attack came on in about two years, with complete ptosis of the left eye only. On account of these periods of rest it is as I stated before very hard to determine just what effect any remedy is going to have; therefore I think Dr. Stucky's cases are to recent to say positively that the medication is the cause. His report, however, is one of much interest.

Dr. Wm. Bailey: Dr. Stucky has presented us with an exceedingly interesting clinic, and I want to say moreover that I am gratified because it is in a department of therapeutics that has been very uncertain in its effects. Certainly the cases presented to-night with the history as detailed, should induce us to give the remedy a trial at any rate. I am sure that Dr. Cheatham is right as to the uncertainty of these cases, the progress and natural history of them is so marked even under the most thorough treatment. I have had a case of epilepsy on bromides without an attack for eighteen months and believed that the remedy did a great deal good; very much to my mortification he had an attack yesterday and one again to-day, notwithstanding he has been kept upon the bromides constantly. I am inclined to think from the presentation of the subject in the papers and by the discussion to-night, that I shall give the preparation of gold and arsenic a trial at the first opportunity. It certainly offers us something where we need much.

Dr. Wm. Cheatham: I have used the bromide of gold and arsenic in one case; the man has atrophy of both optic nerves and is also said to have syphilis. He has been on anti-syphilitic treatment, however, with no improvement. He took the gold, I think, three weeks, but there was no perceptible change. Vision is reduced to 6–200. He has also had two courses of strychnia

nitrate hypodermatically, with no improvement.

DR. H. A. COTTELL: I am sorry that I came too late to hear the essay, but take it that the remarks of Drs. Bailey and Cheatham set forth the facts pretty clearly. Their experience is the common experience of every man who treats such cases—their issue is very uncertain. A case of locomotor ataxia came under my care four years ago. The patient went through the hands of several physicians, growing worse all the time and was finally forced to go to bed. He had lightening pains, which were so severe that he was kept under the influence of morphine for a considerable time. Although the case was non-syphilitic he had been given iodide of potassium, in fact, I believe, almost everything except the bromide of gold and arsenic. He finally went to Pennsylvania somewhere to see a priest who was said to work miracles. He was given a prescription of wine of cocoa and nitroglycerine and made a seemingly complete recovery, although to the practiced eye his gate is slightly ataxic.

I had another case in the person of a Jewish man—a well marked case of locomotor ataxia of syphilitic origin, at least such a history was elicited. This man seemed to be improving under iodide of potassium, and coming to me one day, he asked, if I thought it would do him good to go to the country. I told him I thought it would, if he would simply go there and rest, that he must not take much exercise. He went down in Breckinridge County, and while there fell in with an old fashioned German doctor, who told him that his disease was not locomotor ataxia, but simply inflammation of the spine. This doctor put him under treatment, applying poultices and plasters, and at the same time drugging him with herbs. The man grew rapidly worse, returned home, became bedridden, and, I believe, died. He was never able to get out of his bed after his trip to the country. What this country doctor did to make this patient grow so suddenly worse, I cannot understand. These two cases represent the two extreme conditions. We have all seen ataxic symptoms progress and diminish, oscillating between these two extremes. We see, however, many cases that have been moderately ataxic for years, and it is to be hoped that something has been found that will make an impression upon the lesions which lie behind the symptoms. One of the most discouraging things in the life of the specialist in nervous diseases, is that there is so little real therapy in the practice. In consequence of this the temptation to substitute quackery in this department for the principles of scientific medicine is great indeed. I am sorry to see that some eminent men in this country have found the temptation too much for them. If any remedy can be found that will make an impression upon scleroses, posterior, lateral or disseminated of non-syphilitic origin, we all shall hail it with delight. At the last International Medical Congress, Strümpfel read an able paper on scleroses, taking the ground that the only curable cases were those of syphilitic origin. I hope that the bromide of gold and arsenic is the remedy we have been looking for.

There is something very peculiar about the heavy metals like gold, platinum, etc. They have very little mechanical effect as we know. It has been found that chloroform will take more gold in the presence of nitric acid, so that all the double salts can be made—chloride of gold and sodium, bromide of gold and sodium, etc. They are chemically, I suppose, what would be called double salts, yet technically they are not exactly double salts. As to what becomes of this medicine, whether it is eliminated by the kidneys as bromine, or whether the arsenic is turned loose in the system, or the gold eliminated as chlorine, would be interesting. It is something like the question brought up by Dr. Howard some time since—the treatment of goitre by the use of iodine under the plan known as electro-phoresis—he alluded to a point which will perhaps help us out. The idea was that iodine being driven in by galvanic current, the iodide of potassium was decomposed and active iodine turned loose in the substance of the goitre. It is a well known fact that many beneficial results are obtained from elements in what we call the nascient state, and many chemical combinations may be affected in that way that would not obtain under different conditions. It is possible that the gold may carry a molecule of arsenic into the economy in this combination and give it up in such way as to cause the arsenic to be more effective than it would in any other way.

DR. T. H. STUCKY: My sole object in showing these cases and in bringing the subject before the Society was not to place myself on record that gold would cure these conditions, but it struck me as being a very peculiar coincidence that such marked results and such marked improvement should be manifested in so short a time. Out of a series of eleven cases of neurotic troubles in hospital and private practice, I have been surprised at the amount of improvement. One case is a very prominent man in a fashionable portion of the city, who has been living for a long time almost the life of a child, and who has been under the treatment of many neurologists. While visiting his wife, she heard of my having treated an other case and suggested the same remedy be given this gentleman. He had incontinence of urine, incontinence of feces, entire loss of control of the lower half of his body, lightening pains in the legs and over the region of the stomach, rest disturbed, and had been in about this condition for four years. I first gave him ten drops of mercuric bromide of gold and arsenic three times per day. He had to be lifted in and out of bed; his legs would become crossed in bed and his wife would have to uncross them at night; he would urinate involuntarily during the night; he was afraid to to go out in his carriage fearing he would have an involuntary evacuation of the bowels. He was given this treatment for two months without any apparent improvement, when I increased the dose one drop per day until I secured the effect of the arsenic; the dose was increased until he took twenty-five drops three times a day. He waked up one night complaning of a tingling sensation all over his body; I then ordered the medicine reduced to ten drops three times per day. His incontinence of urine has ceased; he has perfect control of the sphincter ani; he has considerable motion and strength in his legs, and can get up and down without assistance. There has been no further improvement, but certainly this has been a great advance over his previous condition.

There is another point about this solution that has struck me with force, that is its possible or probable usefulness in the treatment of glandular and joint troubles. It combines well with lime and salicylate of calcium. I have just had a case of enlargment of the cervical glands with calcareous change, which has been treated with bromide of gold and arsenic with a decided reduction in the size of the glands. His father gave a syphilitic history, and this patient had been treated for syphilis. I have also tried this remedy on other cases of glandular enlargments, and have been surprised at the rapid subsidence.

Another case, a prominent man who returned from Hot Springs some time ago, much emaciated, taking daily 450 grains of iodide of potassium; he also had unsteady gait and other nervous symptoms. The iodide of potassium was discontinued and bromide of gold and arsenic administered. While there has been no marked improvement in his gait, there has decided improvement in flesh.

Another case gave the history of pulmonary hemorrhage spitting of blood, yet there is no marked change to be found in the lung. She has been placed upon this agent, starting with four drops increasing one drop every day until she is in better condition and weighs more than she has in six years.

These cannot be coincidences, and the cases I have referred to demonstrate the usefulness of this agent in the treatment of syphilitic lesions. We have had several cases of syphilis in the clinic at the college that I did not refer to in my paper treated with this agent in all of which there has been a more rapid subsidence of all symptoms than usually obtains under the use of mercury alone. There has not been the marked ptyalism, nor the marked retraction of the gums, and the eruption has dried up very rapidly. The fact then that it enters into combination with lime, that it enters into combination with mercury in the form of a solution and is probably eliminated by the kidneys shows that it has a decided advantage over the old chloride of gold and sodium, which was not readily assimilated. Experience thus far has proven that this solution has a great advantage over iodide of potassium in that it does not produce gastric irritation. None of the cases in which it has been used have exhibited any gastric symptoms; it has produced no interference with digestion or the secretions, and it not only seems to have an especial action upon the constitution, but proves to be a

general tonic in its effect throughout the entire alimentary tract.

I have simply shown these cases with the hope that it might be of service in suggesting a new field of experiment. There is one more point upon which I would lay special stress. I made the error myself a year ago when the first specimen was sent to me by Dr. Barclay, of Pittsburg. We are inclined to discard its use too soon. We must push it like we do iodide of potassium for its full effect. I believe it is a good addition to our therapeutics and that its outcome is destined to be a great one. Certainly it cannot be explained that these three cases I have exhibited, and the others that have been treated, would have improved so markedly without its use. It has not been my experience that cases of locomotor ataxia suddenly turn in three or four weeks without treatment into a condition of decided improvement. It has not been my experience that within three or four days cases showing evidences of involvment of the lateral columns begin to assist themselves. It is not my experience that cases of paresis of a certain lot of muscles begin to take on action, and that patients state they can feel a tingling in that part, which I do not attempt to explain; nor do I attempt to localize its action exactly in these cases, I simply present the patients and give my experience in their treatment to emphasize my statement that I believe this remedy has a wide field of usefulness in the cure of neurotic conditions.

I have used bromide of gold and arsenic in two cases of incontinence of urione; in one of these there has been decided relief. I would like to call especial attention to its service in the treatment of choreic conditions; we get not only the benefit of the arsenic, but the sedative action of the bromide and alterative effect of the gold. I have used it with success in three cases of chorea without any other treatment.

CONTINUED DISCUSSION OF APPENDICITIS.

DR. H. A. COTTELL: When I proposed at the last meeting of this Society that the subject of appendicitis be again taken up at this meeting, it was not with the idea of entering seriously into the discussion myself. It is the old controversy of surgery vs. medicine. In these cases of so-called appendicitis, I suppose they are not limited strictly to the vermiform appendix; there is such a thing as typhilitis and perityhilitis as well as appendicitis, and it is not until the surgeons knife has brought to light the exact condition of things, that we are sure of our diagnosis. For instance if I should report a number of cases I believed to be appendicitis that got well without operation, the surgeons might say "how do you know it was appendicitis." In a certain proportion of cases I should have to confess I did not know whether it was or not.

In the course of practice extending over a period of twenty-two years, I can recall six cases of appendicitis, or inflammatory trouble involving the appendix or cæcum. In all those cases I had the benefit of able consultants, and in all except one I had the advice of one or more eminent surgeons. It has always been my rule when I made out the diagnosis of trouble in the appendicæl region to send for a surgeon that the patient might have the benefit of early operation if it was deemed advisable.

The first case was in the person of a child twelve years old; I had a physician in consultation; no surgeon saw the case. It was unquestionably one of intestinal obstruction from fecal accumulation in the cæcum; it could be easily made out. Under deep injection, the fecal accumulation finally worked loose and the patient made a good recovery.

Some time after that a little girl about the same age developed a decided tumor in the right iliac region with great tenderness; it was unquestionably cæcal and inflammatory. I called Dr. W. O. Roberts to see the case as soon as I was satisfied of the diagnosis, that the patient might have the benefit of early operation. He counseled against operative interference and the patient recovered.

The third case was one of somewhat obscure diagnosis; I would not contend that it was a case of inflammatory trouble in the region of the appendix, although the bowels were obstructed, and the symptoms seemed to indicate appendicitis. This case terminated spontaneously. Drs. Turner, Anderson and Roberts both saw the case in consultation, and both advised against operation.

The fourth case, in the person of a little boy about six years of age, was very remarkable to me in its outcome and history. There was great tenderness in the right

iliac region, with a tumor which was very marked. I saw the case in the evening, and as I expected to leave the next morning for Chicago, after visiting the patient with Dr. Roberts I left the case in his charge. There was no question as to the diagnosis, and we believed it was clearly a case calling for operation. Dr. Roberts decided to operate. The surroundings were such that an operation there even in the hands of this eminent surgeon was not to be thought of, and he tried to persuade the family to send the child to the Children's Hospital. I was absent for nearly four weeks; on my return I thought of the case and went as soon as possible, to inquire as to the outcome of the operation which I supposed had been performed. I was told that the family would neither send the child to the Hospital nor consent to an operation; but that the child had made a quick recovery.

The fifth case I saw in consultation with Dr. J. L. Howard. A clear diagnosis had been made; Dr. Roberts had also seen the case. The patient (a man) had grown suddenly worse in the night, and was in a state of collapse when I saw him. Dr. Roberts operated the next morning. It was with great difficulty that the appendix was found. It looked at one time as if the surgeon would have to give it up, but the appendix was finally reached and was found to be perforated. The patient had suppuratiue peritonitis at the time operation was performed, and the result was a fatal one, necessarily so I think on account the advanced condition of things and the weakness of the patient. Surgery did not have a fair test in that case. Up to that time all the cases of this trouble I had seen, none of which had been operated upon, had terminated in recovery.

The sixth case was one which was also seen in consultation with Drs. McMurtry, Larrabee and Ouchterlony. The patient was a child two years of age. It proved fatal. I am quite sure an operation would have been performed if the conditions would have permitted. Dr. McMurtry advised against the operation, giving as his reasons that the child was entirely to young to bear it. Besides its condition was a very extreme one. The expectant plan of treatment was therefore carried out, but with a fatal result.

Dr. A. H. Vance: Did you ever lose a case of acute peritonitis in the male?

Dr. H. A. Cottell: I do not recall a case that has died where a diagnosis of peritonitis was made. I remember one case which Dr. Anderson will also recall, occurring in a little boy. Diagnosis of appendicitis was never made, nor was diagnosis of peritonitis made. However, the child had symptoms which rather led us to believe that might have been the trouble; he died of heart failure. He never had a tumor, a dose of salts passed through his bowels the day before he died; he had no tenderness nor distension of the abdomen, and the truth of the matter is, I do not know what was the matter with him. We consulted as to the condition, but nothing definite was arrived at. It may have been a case of appendicitis.

Dr. J. A. Larrabee: Without any data, without statistics and without any record of cases, I simply wish to say that I have treated a great many cases of peritonitis before we attached the importance to appendicitis that we now do, and the entire ignorance of that cause, and while doing so and reflectsng upon this cause in our present enlightened and advanced state many of the cases might be claimed to have been connected with lesions of the appendix. Certainly it has been pretty thoroughly demonstrated at this time, but when I look over my practice I can recall many cases by memory alone of this character that have gotten well without operation. I can also recall cases that have died. I had one case very recently of peritonitis occurring in an infant three weeks old. I do not suppose that was connected with the appendix, but it was a typical case of peritonitis which recovered; it was syphilitic in its nature. I cannot report the cases by name and date, but I have lost cases of peritonitis in the male.

Just here I would call attention to a proposition I made at the last meeting, that each member of this Society hereafter report each case occurring in his practice of lesion in this region, whether it be appendicitis, peritonitis or otherwise, that a record may be made of it.

Dr. J. L. Howard: In the discussion of appendicitis at a recent meeting of this Society I believe the point was brought up that surgeons in England were not now operating very extensively for this condition. In the March 24th number of the *British Medical Journal* Mr. Jessop re-

ports four cases of appendicitis of the type that Dr. Cartledge laid so much stress upoh, *i. e.* stenosis by a fibrous band near the proximal end, the distal portion being very much distended with mucous, but without perforation.

Dr. Grant operated on a case of appendicitis last week at the clinic, in which the symptoms were very marked and the diagnosis unquestionable. When an incision was made an abscess was found filled with pus, walled off from the peritoneal cavity and entirely mural. No adhesions were broken down as it was not deemed wise to invade the cavity which was not involved, but the surgeon stated that he believed the appendix was the *fons et arigo mali* and that the appendix would be discharged with the pus.

Of course in a case of this kind no one can deny that opening of the abscess was the proper procedure.

Dr. Turner Anderson: In regard to peritonitis in the male, I want to say that I have a very distinct recollection of two cases I have had where the death certificates have been signed, in all probability by myself, the cause of death being given as peritonitis, However, both these were clearly cases of traumatic peritonitis. One was a little boy that had been punched in the abdomen by a playmate, in being forced into line marching from school. He died five or six days later from peritonitis. Another occurred in a boy fifteen years of age, who also gave the history of having been struck in the abdomen by some means.

I stated at the last meeting what I have said on many occasions, that I did not regard perityphlitis of very much consequence until after the nomenclature had been changed; until it was denominated appendicitis, I had very little concern in regard to the disease. I stated as a personal experience extending over more than a quarter of a century that I had not seen a case which had terminated in death. I simply gave this as a personal experience; I do not doubt what other men say; I do not question the veracity of other reports, nor do I question the fact that there are cases which should be operated upon. I remember very well the case Dr. Cottell refers to; there was a large tumor in the classical region, and it looked very much like a case which ought to be operated upon, and that very promptly; Dr. Roberts also saw the case, and I told him perhaps it was a case demanding operation and I would sanction it if he desired to operate. The mother declined to have the operation performed. I also made the statement at that time that I had seen many cases of a similar character which had gone on steadily progressing in a satisfactory way and finally recovered, and I believed that this boy would also get well without operation, and he did get well. It was only a short time before this that Dr. Roberts had seen another case with me where there was a large tumor, and where it looked as though suppuration and rupture might occur. Operation was proposed and refused. The case went on under ordinary medical treatment and made a satisfactory recovery.

Dr. A. M. Vance: I would like to exhibit an appendix taken from a man twenty-three years of age, after having suffered with appendicitis four days. The patient was in a condition of active sepsis; there was quite an accumulation of very offensive pus, and this necrotic appendix was found. I first saw the patient at three o'clock to-day and operated ten minutes afterwards. Sepsis was evidently established from this collection of pus, and while the probabilities are the patient will die from sepsis, I believe the cavity is shut off.

The question has been mentioned that not many operations were being done at present time for appendicitis in Great Britian: I have here a quotation from a recent issue of the *British Med. Journal*, the conclusions of G. H. Sanborn in regard to operative measures in appendicitis are:

1. That in all cases the physician is concerned only in the early recognition of the disease, the subsequent treatment to be left to the surgeon.

"2. That the catarrhal or mild form of appendicitis may be considered the only medical form of the disease; and delay in operating may be encouraged to a reasonable extent.

"3. All cases of appendicitis which, at the end of thirty-six hours from the beginning of the attack, show signs of increasing disease, should be operated upon.

"4. That the majority of so-called recoveries, treated medically are not recoveries in the full sense of the word, but simply a respite which enables one to

settle worldly affairs, and take out a life insurance policy, in anticipation of a fatal termination.

"5. The early surgical treatment of appendicitis enable us to avoid in every case uncertain results of a spontaneous cure, the danger of recurrent attacks, and the often fatal general peritonitis in apparently mild cases,—*Brit. Med.*

I would like to make a point in regard to the conservative treatment of appendicitis: The question has been asked as to how many members of this Society for anstance have treated cases of acute peritonitis in the young male; in most cases the question has been answered in the affirmative. Since the meeting at Dr. McDermott's one month ago, Dr. Cartledge and myself have taken occasion to look over the death certificates of the city of Louisville for the last twenty-three years and find 168 cases of acute peritonitis in the male, the age averaging twenty-eight years, and nearly every prominent physician in the city has his name affixed to one or more of these death certificates. We believe that at least seventy-five per cent of cases of acute peritonitis in the young male can be attributed to the appendiceal region, as there are few other causes outside of traumatism that will cause peritonitis in this class of cases. We excluded in these statistics all cases at all doubtful; all cases of intussusception; all cases of obstruction of the bowels; all cases of volvulus; all cases where traumatizm was a factor, and it may be assumed too, I think, that a great many of the so-called obstruction of the bowels, volvulus, intussusception, etc. are caused by paresis due to inflammatory troubles in the right iliac fossa more than likely having their origin in the appendix.

Dr. L. S. McMURTRY: (Visiting) There is very little I can say, as the subject has been so thoroughly discussed by the previous speakers. I am somewhat surprised that there should be any question about the gravity of the disease, or importance of surgical treatment. There can be no question about its being a very murderous disease, and I am surprised that my friend Dr. Cottell, considering the disclosures which have been made in regard to appendicitis within the last few years, still separates it into typhlitis, perityphlitis, etc. It has been demonstrated beyond question that practically all inflammatory conditions in the right iliac fossa are of appendicular origin. I believe that we can never settle any question in medicine or surgery by the recital of cases of doubtful diagnosis. We find fecal accumulations in the cæcum, non-inflammatory in character; we may have cases of catarrhal appendicitis, a large proportion of which go on to recovery; recurrence is common and ulceration and perforation may take place—in other words the case assumes a different phase of the disease and may result fatally without operation. The number of deaths from appendicitis is simply enormous at the present time. The Health Officer's Report for the City of Louisville at the end of every week will show five to six deaths from peritonitis; it is reasonable to suppose 2½ per cent. of these in males, and 1½ per cent. in females, are due to appendicitis. These facts in regard to the disease are recognized generally, and it seems to me after inspection of an appendix such as shown to-night, all question of the fatal and serious character of the disease would be placed forever at rest. To my mind the treatment of these cases is nothing but the application of a general surgical principle that is recognized in all other parts of the body; that is, when there is an abscess anywhere, to open and evacuate it.

Another feature about the surgical treatment of the disease is that we may have a large number of cases of appendicitis which apparently get well, and pass out of observation, and the disease will recur and ultimately require operation, in a large proportion of cases. In England, as has been mentioned by Dr. Vance, appendicitis is now universally regarded as a surgical disease, and all over this country professional opinion is very rapidly changing from the medical to the surgical side. There is one thing by which we are apt to be misled, that is the conclusions to be derived from very late operations; where the disease has gone on until septic peritonitis has spread; where there is a large accumulation of pus with a necrotic appendix and the patient has become thoroughly septic; there is nothing to be expected in such cases from any operation. Eleventh-hour operations are nearly all disastrous and are not a fair test of the operative treatment of any disease. The operative treatment of appendicitis is eminently satisfactory

when done early. In some cases very little surgery is required; in such as the one referred to by Dr. Larrabee it is only necessary to open the abscess, evacuate the pus, irrigate it and put in a drain. In many cases it is not advisable to carry out ideal surgery. However, I believe in every case where the patient's condition will permit, the appendix should be removed when it is the source of the tronble, just as we would remove a sequestrum of bone causing abscess in any other part of the body. There has been the greatest advance in the treatment of this disease. I believe it will not be a year until the subject can be discussed, and there will be no difference of opinion.

Dr. T. L. McDermott: I do not indorse what Dr. McMurtry has said, of course if I could, I would not have written the paper read before this Society some time since. To my mind the question of diagnosis of appendicitis remains the most important factor, and, until we arrive at a more satisfactory classification, we can never clear up the proper history of these cases. We should take the cases in which surgeons have been called early, operation advised and refused; then take the cases treated medically, and by comparing results with those in which operations have been performed, we may be able to reach a satisfactory conclusion. Cases are frequently reported where diagnosis had been made of appendicitis, and operation revealed a normal condition of the appendix, the trouble having been due to some lesion of the liver, kidney or other organs; the question then comes up, how can we arrive at an accurate diagnosis?

My own opinion is that the safest plan is to follow the conservative line of treatment in these cases until such time as some light is thrown upon the matter, as certainly the history of appendicitis is still a mystery, and we are largely at sea as to the diagnosis.

TREATMENT OF PERIPHERAL NEURITIS.

Leyden (*Berl. klin. Woch.*, No 20, 1894) discusses the treatment of multiple neuritis. He considers that in the case of neuritis following acute specific diseases, care during convalescence as to nourishment, rest in bed, and avoidance of overexertion contribute to prevent its occurrence. "Etiological treatment" (removal of the cause) in neuritis due to alcohol or lead, and treatment of the primary malady as in diabetes is of the first importance. There is no specific remedy for multiple neuritis and treatment by drugs does not play a very important part. Owing to the fact that rheumatism is not infrequently an element in the etiology, salicylate of sodium and other anti-rhenmatic drugs had been used without producing any good results in the majority of cases. Iodide of potassium was of use only now and then, and mercury was of doubtful value. Antipyrin, phenacetin, exalgin, euphorbia, and methylene blue were sometimes of use for the relief of pain, but it was often necessary to resort to morphine, chloral, sulphonal etc. Strychnine, formerely much used, but lately fallen into the background, deserved to be tried; by increasing the excitability of the affected muscles, it favored the return to normal function and nutrition; it ought especially to be resorted to in progressive cases in which the respiratory movements were threatened. Leyden prefers to use it as a subcutaneous injection, gr. $\frac{1}{70}$ to gr. $\frac{1}{50}$ twice daily. Massage and baths were valuable auxiliaries which were indicated, especially the latter, in the later stages of the disease. General hygienic treatment was of much importance. Rest—as a rule rest in bed—was of the first importance in the early stage; in the later stage, feeding. Finally, in the latest stages of all, moral suasion, rousing the patient's latent energies, was often of great value. Passive movements, and encouraging the patient to make active movements, were generally attended with better results than massage in this stage. Electricity, formerly used too much, was now used too little, but its usefulness was greatly limited by the fact that in many cases the pain caused was too great to permit the treatment to be continued.—*British Med. Jour.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE AMERICAN JOURNAL OF OBSTETRICS.

for August contains a paper by Dr. Thomas A. Ashby on

The Influence of Minor Forms of Ovarian and Tubal Disease in the Causation of Sterility.

As the result of his observations, the author draws the following conclusions:

First. The adjustment of the tube and ovary during ovulation is effected in the human female by the most delicate mechanical arrangement and may be defeated by trivial mechanical interferences.

Second. In animals that habitually have multiple pregnancies a more perfect mechanical provision is made for the reception of the ovum by the tube. The number of ova impregnated seem to bear a close relation to the perfection of the arrangement which is provided for their passage into the tube. Thus, in the bird will be found the most perfect type of mechanical adjustment, in the women the most intricate and difficult.

Third. The adjustment of the pavilion of the ovary may seem to be set aside by the most trivial vices of structure and disease, resulting in relative or absolute sterility.

Fourth. Sterility is due to minor diseases of tubes and ovaries to a greater extent than has been recognized. In an investigation of the etiology of this condition this fact should be considered in connection with an investigation of other causative influences.

Fifth. The highest aim of surgery is to restore and not to destroy function. In the treatment of minor forms of ovarian and tubal disease this fact should be borne in mind. Organs should not be sacrificed to the rule of expediency, but should be preserved in deference to a law of genuine conservatism.

J. C. Webster, B. A., M. D., F. R. C. P. E., contributes an article on

The Classification of Ectopic Gestation.

presenting the following table. Cornual pregnancy is not included in the table.

I. AMPULLAR, in which the gestation begins in the ampulla of the tube. This is by far the most common origin.

1. *Persistent.* In rare instances the tubal gestation may go on to full time.

2. *Rupture may take place early into the broad ligament*—supperitoneo-pelvic, tubo-ligamentous, extraperitoneal, broad-ligament gestation.

(a). The gestation may continue to develop —subperitoneo-abdominal.

(b). A secondary rupture of the subperitoneo-pelvic gestation may take place into the peritoneal cavity.

(c). The gestation may come to an end:

(a). By the formation of a hematoma.

(b). By suppuration.

(c). By mummification, adipocere, or lithopedion formation.

3. *Rupture may take place into the peritoneal cavity.*

(a). Tubo-peritoneal gestation, in which the escape of the fetus in membranes occurs into peritoneal cavity, the placenta remaining in the tube, its development continuing.

(b). The gestation terminates in various ways: By the formation of a hematocele, the patient dying from the shock and loss of blood, or from peritonitis. In some cases absorption of the mass may occur. In others mummification, adipocere, or lithopedion formation may take place in the festus. Suppuration may result.

4. *The gestation may be destroyed*:

(a). By the formation of a tubal abortion and its passage through the fimbriated end of the tube into the peritoneal cavity.

(b). By the formation of a hematosalpinx.

(c). By the formation of a mole.

(d). By suppuration resulting in a pyosalpinx.

(e). By absorption after early death, by mummification, adipocere, or lithopedion formation.

II. INTERSTITIAL—The gestation may develop in the interstitial portion of the tube:

1. The gestation may go on to full time.

2. Rupture of the gestation into the peritoneal cavity may occur.

3. Rupture into the uterine cavity may occur.

4. Rupture both into the uterine and peritoneal cavities may occur.

5. Rupture may occur between the layers of the broad ligament.

6. After the death of the fetus it may remain in its sac, and possibly may undergo the same changes as in other forms—*e. g.*, Mummification, adipocere, or lithopedion.

III. INFUNDIBULAR—The gestation begins in the outer end of the tube or in an accessory tube ending. Under this heading are to be included the forms described as tubo-ovarian and tubo-abdominal, names which appear to the author to be unnecessary, since the gestation is a tubal one in origin, the end of the gestation sac merely becoming adherent to the abdominal wall, the ovary, or other of the viscera.

In an article on

Surgical Intervention in Tubercular Peritonitis,

Dr. O. S. Runnels says "It is still too early, the years are yet too few, in which to close the discussion or fix the verdict upon many of the claims for this procedure. But this is established beyond cavil: tubercular peritonitis is essentially a surgical disease and cannot be successfully managed without surgical intervention. It is settled that tubercular peritonitis, verified as such by microscopical proof, is curable by celiotomy, and that this remedy is of primary importance in the treatment of such cases. It is proven that the bacillus culture can be arrested if it has not

gone too far, and that the bacillus itself is a *post-hoc*, a follower, rather than a *propter-hoc*, and originator. In the light of present knowledge long-continued mystery concerning abdominal maladies is inexcusable. The exploratory incision is the indicated remedy in every such condition, and will enable the adviser to avail himself of the knowledge requisite for wisest procedure.

Dr. Eugene R. Corson in a paper entitled

A Suggestion in the Operation for Vesico-vaginal Fistula,

reports a case in which he undertook to close the opening after the flap splitting method advocated by Mr. Tait. Two attempts were failures and the author advises the young operator to stick to the old way. At the third attempt the author practiced the following device for drawing the parts within reach of the knife. He cut in half a small hollow rubber ball, such as is found in the toy shops, pierced the centre of this rubber disc with the small blade of a penknife, and passed through the slit made the shank of an ordinary shoe button, the shank appearing on the convex side of the disc. Through this was passed a strong silk ligature, strong enough to bear considerable traction. He then pared the disc down to a size permitting its passage through the fistula and giving him sufficient margin for traction. Curling it up, it was passed, with the aid of dressing forceps, into the bladder, where it expanded, enabling him on traction to draw the vaginal wall well down and within easy reach of any operative measure Through the counter pressure of the disc the paring of the edges of the fistula was greatly facilitated, especially in checking hemorhage. When all the sutures are placed they can be drawn aside and the disc drawn through the pared fistula. When the fistula is too small, and the operator is afraid of injuring the pared edges, the disc can be cut up by scissors and removed peicemeal by the dressing forceps. The author mentions the following points in the use of this device—Choose a rubber ball moderately thin, say the twelfth of an inch, so that the rubber disc may be readily curled up and passed into the bladder with the dressing forceps. Before curling it up draw the button well out an inch or more, that the button head be not in the way. On traction being made the shank immediately slips back into the slit made by the penknife. Make the sutures sufficiently long to permit of their being well drawn out into loops preparatory to removing the disc from the bladder.

Dr. Thomas C. Smith reports

Cases of Excessive Secretion of Milk,

in one of which the daily secretion amounted to half a gallon daily in addition to that required by the child. In the second instance the waste milk amounted to three pints. In regard to the treatment of such cases the author states that as the appearance of the menses causes a diminution in the supply of milk the advice had been given to bring on the menses. Uterine irritation is also recommended. Hot vaginal douches have also been employed, though strapping and bandaging the breasts seem to do more good than any other treatment. In the author's experience, ergot has failed completely. The combination of opium and antipyrin seemed to have the desired effect in the author's first case, but was not resorted to till the affection had lasted nearly three months and while the author would use it in any future case he does not hazzard the asumption that it wrought a cure in the case reported.

Dr. G. Wythe Cook contributes an article on

The Treatment of Abortion.

The patient should be kept at absolute rest and such drugs employed as will conduce to nervous sedation and weaken muscular action until such time as the abortion becomes inevitable. When the abortion cannot be prevented the author is of the opinion that the uterus should be evacuated as speedily as possible. If there is any considerable hemorrhage the tampon should be used. This, according to the author, serves the double purpose of controlling the hemorrhage, and such blood as may escape is retained within the uterus and may dissect off the fetal appendages, in that way facilitating the emptying of the uterus. The best way to apply the tampon is to insert some iodoform gause into the cervical canal and then pack the vagina with long strips of aseptic gause.

If the entire ovum does not come away, the author unhesitatingly advocates the radical method of dealing with it by removal by manual means. He does so for these reasons: "So long as any portion of the membranes or placenta remains within the uterus, just so long is the woman menaced by the danger of hemorrhage or septicemia, or both; and there is no justification in allowing these foreign bodies to remain shut up within the uterine cavity because it has sometimes been done without any disasterous results. Hemorrhage may occur at any moment, or septicemia, by its insidious developments, may sap the strength and destroy the life or produce a condition of chronic invalidism that makes life a burden. Again an enlarged uterus containing a foreign body remains decidedly hypertrophied, and when finally evacuated its walls may remain permanently thickened and its cavity enlarged, these conditions favoring dislocations." The author adopts the plan of emptying the uterus with the fingers if possible, otherwise he sees no objection to the use of the curette. If the cervical canal has closed, a laminaria tent or other cervical dilator should be introduced. He states that more difficulty will be experienced in removing the secundines in an abortion procured by instrumental means than in a spontaneous miscarriage, because in the former case the tissues are more healthy and the placenta and membranes are more adherent. If the uterus has been thoroughly evacuated there will be little else to do, as the lochial discharge will be slight and uterine involution rapid.

The author also enters a little into the question of the duty of the physician to the State in abortion. While believing that it is the

duty of the physician to preserve inviolate any facts that he may have learned in his capacity as physician yet abortion is such a a crying evil that the author is in doubt as to the proper course to persue and evidently leans to the side of shielding the woman. When the patient dies as the result of a criminal abortion the author is of the opinion that the death certificate returned by the attendant should state the true cause of death. In case of the woman surviving he is not so sure of the course the attendant should take, on account of the apparant legal difficulties in legally establishing the facts.

The remaining papers in this issue are:

"Resuscitation, from Impending Death due to Concealed Hemorrhage, by the Infusion of a Litre of Formal Salt Solution centrally into the Radical Artery." By Howard A. Kelly M. D.

"Hemorrhagic Infraction of the Fallopian Tube." By W. W. Russell, M. D.

"Five Cases of Pyosalpingitis." By A. Laptham Smith, M. D.

"A large Meningocele." By Frank T. Meriwether, M. D.

"Report of Cases of Mental Disease dependent on or coincident with Disease of the Generative Organs." By E. L. Tompkins, M. D.

In addition to the above, the journal also contains the report of the proceedings of the Eleventh International Medical Congress.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Etiology of Craves's Disease.

Grube (*Neurol. Centralbl.*) maintains the infectious nature of Graves's disease. He narrates a rapidly fatal case in a woman, aged 50. Three of her four children had died; one of convulsions, two of "nervous fever." As a girl she was said to have been anæmic. Some years ago she began to suffer from nervous abdominal pains, and during the last half year she had had occasional asthmatic attacks, especially in the night. The patient herself attributed her illness to the shock caused by hearing that there was sugar in her urine (said to be about 9 per cent.) six weeks before her death. The asthmatic attacks became worse and a swelling appeared in her neck. The skin of her face appeared somewhat bronzed, as if by the sun. Exophthalmos was not much marked, but the signs of Stellwag and Grafe were both present. The thyroid gland showed hypertrophy of the left lobe and isthmus. Many enlarged lymphatic glands could be felt in the neck. The heart was much dilated, but the heart sounds clear; the pulse was full, strong, and frequent (120 tc 130). There was considerable dyspnœa, especially at night, so that the patient could not lie down in bed; some rhonchus. A certain amount of œdema in the legs. Urine (specific gravity 1030) showed trace of albumen and sugar two weeks after the supposed commencement of the disease. Some tremor in the upper extremities. Slight fever in the evenings. She died in about six weeks from the supposed commencement. Granting the infectious nature of the disease, the infective agent may act (1) on the thyroid gland, causing perversion of its function, which Mobius has suggested as the cause of Graves's disease, the nervous system being affected secondarily; or (2) on the thyroid gland and the nervous system; or (3), and more probably, the infective agent or its products might act on the nervous system directly. Against the nervous theory of Graves's disease it has been urged that the symptoms do not point to one part only of the nervous system being affected; this is, however, no argument against the infectious theory, for several different parts of the nervous system could be affected by a toxin, though the medulla oblongata might be especially susceptible or its rich network of blood vessels might facilitate the working of the infectious agent. The causes which are commonly invoked as starting points for Graves's disease—shock, excitement, overexertion, etc.—can hardly be considered as of first moment, except in so far that they may weaken the body generally and render it less able to resist infection. Grube adds that he can further adduce as arguments in favor of the infectious theory of Graves's disease: (1) That the disease may supervene in cases of endemic or hereditary goitre; (2) the occurrence of swelling in lymph glands, noticed by Muller and in this case; and (3) that a hereditary character of Graves's disease has been recognized.

The Value of Sugar and the effect of Smoking on Muscular Work.

As the result of a series of experimental researches in the Physiological Institute, Turin, as to the value of sugar and the effect of smoking on muscular work, Vaughan Harley (*Journ. of Phys.*,) has come to the following conclusions: (1) The periods of digestion as well as the kinds of food taken have a marked influence on voluntary muscular energy. (2) Irrespective of the influence of food, there is a periodical diurnal rise and fall in the power of performing muscular work. (3) More work can be done after than before midday. (4) The minimum amount of muscular power is in the morning about 9 A. M., the maximum about 3 in the afternoon. (5) Reguior muscular exercise not only increases the size and power of the muscles, but has the effect of markedly delaying the approach of fatigue. (5) The amount of work performed on a diet of sugar alone is almost equal to that obtained

on a full diet, fatigue, however, setting in sooner. (7) In fastening, large quantities of sugar (500 g.) can increase the power of doing muscular work during 30 voluntary contractions from 26 to 33 per cent, while the total gain in a day's work may be 61 to 76 per cent., the time before fatigue sets in being also lengthened. (8) The effect of sugar is so great that, when added to a small meal, it can increase the muscular power during 30 voluntary contractions from 9 to 12 per cent., while the total increase in work may be from 6 to 39 per cent., the approach of fatigue being at the same time retarded. (9) When added to a large mixed meal, sugar can increase the muscular power of 30 contractions 2 to 7 per cent., the increase in total work being 8 to 16 per cent, and a marked increase in the resistance to fatigue is shown. (10) Two hundred and fifty grammes of sugar taken in addition to a full diet increases the day's work; the work accomplished during 30 voluntary muscular contractions shows a gain of from 6 to 28 per cent., the total day's work giving an increase of power 9 to 36 per cent., and the time before fatigue sets in being lengthened. (11) Moderate smoking, although it may have a slight influence in diminishing the power of doing voluntary muscular work, neither stops the morning rise nor, when done early in the evening, hinders the evening fall. (12) Sugar taken early in the evening is capable of obliterating the diurnal fall in muscular power that occurs at this time, and increases the resistance to fatigue.

Gonorrhœal Stomatitis and Ophthalmia in Newborn Child.

Leyden, of Breslau (*Centralbl. f. Gynak.*,) writes that a single girl. aged 20, was recently delivered, a little before term, of her first child. There had been moderate vaginal discharge during the last months of pregnancy; on that account the vaginia was freely washed out with lysol during the entire puerperium, so that the discharge steadily disappeared. The labour was normal. The child (a girl) was rather weakly. Directly the head was delivered the eyes were washed with a 1 in 7,000 solution of sublimate. Until the evening of the sixth day the child seemed fairly well; it took the breast, the motions were normal, and the eyelids did not stick together; but the skin became jaundiced, and on the morning of the seventh day there were all the signs of gonorrhœal ophthalmia in the right eye. A large pustule was found on the mucous membrane of the upper lip, close to the gum. The pus which it contained was found full of gonococci. Notwithstanding all precautions (the case was in the Breslau Lying-in Hospital) the left eye was attacked on the next day. The purulent inflammation of the mouth increased, and there was diarrhœa. The eyes, however, were saved, and after frequent washing of the buccal mucous membrane with the 1 in 7,000 sublimate lotion, the purulent crusts which had formed disappeared, and nine days after the first appearance of the pustule a desquamating area marked the seat of disease. The mother's nipples did not become sore; the child, however, was fed with the bottle directly the soreness of the lip was detected.

Intravenous Injections of Corrosive Sublimate.

At the meeting of the Eleventh International Medical Congress, in Rome, Guido Bacelli (*Berliner Klin. Wochenschrift*, said that intravenous injections had been suggested by him and employed for the cure of malaria. Professor Nothnagel maintains that they are unnecessary, as subcutaneous injections can accomplish just as much without disagreeable consequences. But Bacelli's results, published in 1890, were brilliantly successful as regards the treatment of severe forms of malaria with intravenous injections of neutral salts of quinine, and they contradict Nothnagel's opinion. Since then Bacelli has experimented with corrosive sublimate given by intravenous injections for syphilis. Experiments upon animals were tried first. He then tried the new method in two cases of cerebral syphilis which had resisted cure by other methods, including inunction and hypodermic injections of mercury and iodide of potassium in large doses. The results were excellent. Other cases followed, so that now the method is employed by many Italian physicians. The solution Bacelli employs is as follows:

℞

Hydrarg. bichlor.	1 part
Sodii chlor	3 parts
Aq. dest.	1000 parts

The skin is cleansed and rendered aseptic, and a syringeful of the solution is injected into a vein at the elbow, back of the hand, or thigh. The veins are first made prominent by constriction. The injection must be into the lumen of the vein, otherwise pain and swelling will result. In a few minutes (five to six) mercury is excreted in the saliva. The "cure" begins with the injection of 1 milligramme of corrosive sublimate daily,—that is to say, 1 cubic centimetre of the solution (1 to 1000; then the quantity increases from 2 to 8 milligrammes (the maximum dose). For four milligrammes a two-per-cent. sublimate solution may be employed, so as to avoid the injection of too large a quantity of fluid. In exceptional cases he begins the treatment with doses of 4 to 5 milligrammes.

Bacelli calls special attention to the following points: 1. The small quantity required. 2. The possibility of overcoming many symptoms quickly,—symptoms which indicate direct blood-poisoning with the syphilitic virus. 3. The benefit and widely-distributed action upon vessel walls which are the specially-favored seat of syphilitic alterations.

Bacelli also employs sublimate injections for the cure of echinococcus cysts. The cyst is punctured and about thirty cubic centimetres of the fluid withdrawn through a trocar; 20 cubic centimetres of one-per-mille sublimate solution are then injected, the trocar withdrawn, and a dressing applied. In five days the patient is dismissed cured. The parasite is killed, and the subjective and objective symptoms subside by degrees.—*Therapeutic Gazette.*

Treatment of Typhoid Fever by Carbolic Acid and Chloroform.

The author has, in treating typhoid fever, resorted to the simultaneous use of carbolic acid and chloroform, each of which, employed by itself, has already yielded good results in dothinenteritis. He employs the following formula:

Carbolic Aid (pure)	2.4	gme. (37 grn.).
Spirit Chloroform	8	" (2½ fl. drs.).
Tincture Cardamom	12	" (3 ")
Syrup	60	" (1½ fl. oz.).
Saturated Chloroform-water	275	" (9 ").

Two tablespoonfuls in a little ice-water every two hours.

The patient takes, on the first day, two tablespoonfuls of this potion five times in the course of the twenty-four hours; he repeats the same dose seven times on the next day, and ten times from the third day on, until a marked fall of temperature with a corresponding improvement of the general condition has set in. This result having once been obtained, the daily dose is gradually diminished to six tablespoonfuls and continued for at least a week after the temperature has become normal.

This mode of treatment is said to shorten the duration of the affection, to remove complications, and to rapidly suppress intestinal tympanites, diarrhœa, fœtor of the stools, delirium, and coma; also to promote the assimilation of food and to hasten convalescence.

Carbolic acid, as administered in the above mentioned doses, is said to have always been well tolerated; and the urine hardly ever became darker, and never assumed a blackish color.—*American Medical Surg. Magazine.*

Turpentine in Carcinoma.

John Clay.—(*Medical Press und Circular and New Albany Medical Herald.*)—The author reports five cures of grave carcinoma by means of Chian turpentine. Such favorable results cannot be obtained when the disease has progressed so far as to invade the general system; but even then an improvement can be effected so far as concerns pain and hemorrhage, so that turpentine must be regarded as a palliative agent of the greatest value in carcinoma. Besides the five cases mentioned above the author has treated, during the last nine years, a number of patients with uterine carcinoma with Chian turpentine, who are still alive and present every appearance of health. When it becomes necessary to operate for carcinoma of the mammæ, it is a good plan, according to the author, to administer turpentine for three weeks before the operation, in order to destroy the germs, which constitute the cancerous infiltration of the surrounding tissues, and after the operation the medicine should be kept up for a year, in order to prevent a return. The author has used this method for the last six years in many cases, and has never seen a return. In the treatment of carcinoma, opium and morphine should be almost entirely dispensed with, since their prolonged use in increasing doses contributes materially to produce the cachexia and anemia. On the other hand, Chian turpentine in connection with antipyrine acts as a palliative and has no bad after-effect.

As regards the mode of administration, the author prefers the pills to the mixture, but they are not to be used in cases of cancer of the stomach or rectum, as they are not digested. The pills are to be mashed or broken up and taken in milk, to the number of nine to twelve in twenty-four hours. In conclusion, the author warns patients and physicians that patience is necessary in carrying out this treatment, since three weeks and longer may pass before any sign of improvement is visible.—*N. Y. Therapeutic Review.*

Laudanum in the Treatment of Diphtheria.

It is well known that, in children affected with diphtheria, the dyspnœa and inspiratory spasms visibly increase under the influence of fright and restlessness, whilst they diminish when the little sufferer quiets down. This fact suggested to Dr. C. Stern, of Dusseldorf, (*Medical Week*) the idea of administering opium in the form of laudanum, to children affected with diphtheria, in the hope of thus exerting a favorable influence on the respiratory disturbances due to the laryngeal stenosis. The results obtained by this treatment seem to be worthy of note, inasmuch as Mr. Stern was frequently enabled by this means to avoid tracheotomy in cases in which this appeared before administration of the laudanum to be the only resource.

He gives the little patients, according to their age and the intensity of the respiratory difficulties, from two to five drops of vinum opii, repeating this dose several times when necessary. In the case of children over a year old, he generally begins by administering three drops of laudanum in a teaspoonful of sweetened water. If the effect of this dose is not sufficiently marked, he gives in half an hour two drops more of laudanum. This second dose is said to frequently determine a notable diminution in the cyanosis and drawn conditions of the features. As soon as the respiratory disturbances appear again to be on the increase, another dose of the remedy is given. In this manner, laudanum may be administered for several days in succession at the rate of from three to five drops daily, with careful watching of the child both with reference to the narcotic effects of the drug and the possible need of tracheotomy, although the laudanum treatment in the majority of cases permits of dispensing with this operation.

This treatment is said to be particularly efficacious, when instituted early, especially from the very onset of the respiratory disturbances. Lastly, in cases in which tracheotomy eventually becomes unavoidable, the laudanum treatment makes it at least possible to delay the intervention without inconvenience, which is of considerable importance when the patient has to be transported to a hospital to undergo the operation.—*N. A. Practitioner.*

SURGERY.

Gunshot Wounds of the Intestine.

DEDUCTIONS.

1. Laparotomy is the only rational procedure in all cases of gunshot wounds of the abdomen where there is reasonable evidence that the ball has entered the abdominal cavity, and each moment's delay will materially lessen the chances of recovery.

2. If there is a reasonable doubt as to whether or not the ball has entered the abdominal cavity, give the patient the benefit of that doubt by doing an early exploratory operation for diagnostic purposes.

3. In wounds of the pancreas complicating gunshot injuries of the intestine, a resection of this gland may be done, care being taken not to include the head or common duct, as death invariably follows such procedure.

4. The segmented catgut rubber ring being uneffected by the imbibition of intestinal secretion, is one of the very best aids in circular enterrhaphy or lateral anastomosis.

5. A ring composed wholly of catgut is entirely worthless as an intra-intestinal support on account of its highly absorbable qualities.

6. When the Lembert stitch includes only the serous, or a part of the muscular coat they do not as a rule, ulcerate their way into the bowel as is claimed by some, but usually become encysted, and remain near their place of introduction.

7. An intestinal wound when properly treated usually becomes securely sealed in from six to twelve hours by the formation of plastic peritoneal exudation; but this must not be too confidently relied upon as it may be very materially retarded.

8. If there arises evidences of a supurative peritonitis, do a second abdominal resection, disinfect the cavity and apply drainage. M. L. Hefeelfinger, M. D., in *Texas Curier-Record.*

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Aromatic sulphuric acid was Sydenham's favorite remedy in bleeding at the nose or in spitting blood. Ten to twenty drops three or four times a day.

The Occurrence of Hemorrhage After Operation for the Removal of Adenoid Tissue from the Naso-Pharyngeal Vault; with the Report of a Fatal Case.

The case reported by Dr. J. E. Newcomb (*American Journal of the Medical Sciences*), is that of an anæmic, somewhat strumous boy, nearly four years of age. There was no evidence of hæmatophilia. The operation was done with the usual precautions. Gradle's forceps and Gottstein's curette were employed. Soon after the child got home an oozing hemorrhage began. The *physician*, however, was not *sent for* until *twelve hours later*, when the child was found in a desperate condition from loss of blood. *Death followed shortly.* Of eleven cases of hemorrhage (reported by Rousseau, four) occurred in the first decade of life, five in the second. The youngest age recorded is four years (Delavan), the oldest is twenty-eight (Ruault.) The time after the operation when bleeding began varied from immediately to twenty hours. Tamponning was the favorite measure of relief employed. Patients from whom adenoid tissue if removed ought to be kept under careful observation for at least twenty-four hours.—*International Medical Magazine.*

Abscess.

Never try fluctuation across a limb, always along it. Never forget that: (1) Abscesses near a large joint often communicate with the joint. (2) Abscesses near a large artery sometimes communicate with the artery. (3) Abdominal wall abscesses sometimes communicate with the gut or the solid viscera.

Never forget that early openings are imperative in abscesses situated: (1) In the neighborhood of joints. (2) In the abdominal wall. (3) In the neck, under the deep fascia. (4) In the palm of the hand. (5) Beneath periosteum. (6) About the rectum, prostate and urethra.

To wait for abscesses to "point" or to "burst" in these situations is culpable as well as cowardly.

Remember the frequency with which hematomata and traumatic aneurism have been mistaken for abscesses, and incised with untoward results.

Do not open an abscess anywhere near a large artery without first using a stethoscope, and then only by Hilton's method (*i. e.*, scalpel, dressing forceps).

Never, under any circumstances, use for exploratory puncture "that surgical abomination—a grooved needle"—for it will allow contamination of all the tissues through which it brings the fluids. (Thornton.)

Never plunge in opening abscesses; never squeeze the sac after doing so.

Do not forget that your incision should radiate: (1) In abscesses pointing near the nipple. (2) In abscesses near the anus. (3) In scarifying the chemosis of the cornea.

And that your incision should be longitudinal: (1) In the hand. (2) In the urethra. (3)On the vertex.

Do not forget that incisions for abscesses in neck and face should run parallel with the wrinkles and folds.

Do not be afraid of hurting the lacteal tubes in mammary abscess. More harm is done to the gland by the enlargement of the walls of the abscess than by a free incision.

Never make a palmar incision except in the middle of the lower third and in the axial line of the fingers or at the sides of the palm.

Do not forget, in opening a deep abscess in the lumbar region without the projection of the abscess, to cut down opposite a transverse process, not between them, for fear of wounding a lumbar artery.—*Atlanta Med. and Surg. Journal.*

Night-Sweets of Phthisis.

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Sulphate of atropine	0.0005	grm
Sulphate of zinc	0.12	grm
Gallic acid	0 12	grm
Creasote	10.0	gtt

M. et div. in pil. no v.
Sig.: One pill thrice daily.

—*Med. World.*

GYNECOLOGY.

The Early Treatment of Carcinoma Uteri.

The large number of hopeless cancer cases applying to me for relief have induced me for the past three years to adopt certain stringent rules with regard to my own patients, which I have taught for the same period in my lectures at the Johns Hopkins Hospital.

The end in view is two fold—first, by treating cervices liable to become cancerous, and thus prevent the formation of this neoplasm; and, secondly, to detect cancer of the cervix at a sufficiently early date to successfully eradicate the disease.

(1) It is the duty of the obstetrician to see each patient at his office from two to three months after her confinement, and there to examine and make a careful record of the condition of the pelvic structures, stating accurately what lesions have been produced by the confinement.

(2) Cervical lacerations should be certainly described, noting the position and depth of the tear and the appearance of the lips. Lacerations require no treatment when the lips are thin, uninfiltrated, and lie together. Thick, infiltrated, and everted lips associated with cervical catarrh call for depletory treatment followed by repair of the laceration.

(3) Every woman who has passed thirty-five years of age and has borne a child should have this examination made without delay by a competent physician, and if the cervical lips do not appear perfectly sound she should be kept under observation and examined at intervals of from six to eight months.

(4) Every woman over thirty-five, with a cervical tear, should be examined at least once a year for ten years, or longer, if the appearance of the lacerated area is not perfectly healthy.

(5) These rules apply with special force to patients whose family history shows a marked inclination to cancerous diseases.

If these rules are conscientiously observed, there is not a shadow of doubt but that thousands of lives would be saved in this country alone by timely interference with a disease so markedly local and accessible in its origin.

I feel that while we are searching for a cure for cancer, the line of progress in the immediate future for the gynecologist is clearly in the direction of prophylaxis and anticipation, either preventing or discovering the malady in its earliest stages.—*New York Medical Journal.*

New Uses for Guaiacol.

Diabetes.—Dr. Clemens, of Frankfurt-on-the-Main, reports favorable results in this disease from the administration of pure guaiacol, in the daily dose of from 18 to 30 drops, given in three doses, suspended in milk or codliver-oil. The patients were allowed to drink beer, and were upon a nitrogenous or mixed diet. At the end of eight days there was a notable diminution of sugar. After four weeks of treatment the patients were able to partake of some saccharine foods without increased glycosuria being produced. The salutary effect upon the polyuria was still more pronounced. At the end of several days of treatment the amount of urine passed in twenty-four hours had often diminished by one-half. The general condition was improved The drug was well borne.—*La Med. Moderne.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM AUGUST 5, 1894, to AUGUST 28, 1894.

A board of Medical Officers to consist of
Major Valery Havard, Surgeon,
Major John Van R. Hoff, Surgeon,
Major George A. Torney, Surgeon,
is by direction of the Secretary of War, appointed to meet at West Point, N. Y., August 15, 1894, or as soon thereafter as practicable, for the physical examination, of the cadets of the 1st and 3rd Classes; the cadets of the 2nd Class on their return from furlough and such other cadets of the Military Academy and candidates for admission thereto as may be ordered before it.

Leave of absence for one month, to take effect about August 5, 1894, is granted Captain W. Fitzhugh Carter, Assistant Surgeon.

Captain Wm. J. Wakeman, assistant surgeon U. S. Army granted one months leave absence, on completion of his duties at Fort Thomas, Rifle Range, Ky.

Leave of absence for one month to take effect upon the completion of his present duty at the Fort Thomas Rifle Range, is hereby granted to Captain William J. Wakeman, Assistant Surgeon.

Major Curtis E. Price, Surgeon, upon the expiration of his present leave of absence, is ordered to Fort Supply, Oklahoma Terry, for duty at that station, relieving Captain Wm. H. Corbusier, Assistant Surgeon. Captain Corbusier on being relieved by Major Price, is ordered to New York City, N. Y. for duty as Attending Surgeon and Examiner of Recruits, relieving Captian Wm. C. Shannon, Assistant Surgeon. Captain Shannan on being thus relieved, will report in person to Col. C. H. Alden, Assistant Surgeon General, president examining board, for examination for promotion.

Captain Edgar A. Mearns, Assistant Surgeon, will be relieved from duty with the commission appointed for the location and marking of the boundary between Mexico and the United States and ordered to Fort Myer, Va. for duty relieving Captain John L. Phillips, Assistant Surgeon. Captain Phillips on being thus relieved, is ordered to Fort McKinney, Wyo. for duty at that post relieving Captain George E. Bushnell, Assistant Surgeon. Captain Bushnell on being thus relieved ordered to Davids Island, N Y., for duty relieving Captain Samuel Q. Robinson, Assistant Surgeon. Captain Robinson, on being thus relieved, ordered to Philadelphia, Pa. for duty as Attending Surgeon and Examiner of Recruits.

NEWS AND MISCELLANY.

Program of the Nineteenth Annual Meeting of the American Academy of Medicine "Waumbek" Jefferson, N. H., August 29 and 30, 1894.—The Profession is Cordially Invited to Attend.

OFFICERS.

President: George M. Gould, Philadelphia.

Vice-presidents: C. C. Bombaugh, Baltimore; J. McFadden Gaston, Atlanta; S. W. French, Milwaukee; C. W. Foster, Woodford, Me.

Secretary and Treasurer: Charles McIntire, Easton, Pa.

Assistant Secretary: Edgar Moore Green, Easton, Pa.

Council: The Officers Ex-officio, and Traill Green, Easton, Pa.; Henry O. Marcy Boston; Benjamin Lee, Philadelphia; Albert L. Gihon, U. S. N.; R. Stansbury Sutton, Pittsburg; Frederic H. Gerrish, Portland, Me.; Leartus Connor, Detroit; Samuel J. Jones, Chicago; Theophilus Parvin, Philadelphia; P. S. Conner, Cincinnati; Justin E. Emerson, Detroit; Bayard Holmes, Chicago; W. T. Smith, Hanover, N.H.

Wednesday August 29th,—The program is arranged for the day, a recess will be taken, upon motion for dinner; and should there not be time, the papers not read will be read on Thursday before the papers assigned for that day.

Ten a. m. business meeting. Open only to the Fellows of the Academy.

Reading of the minutes of the last annual meeting.

Report of the council.

Election of Fellows.

Appointment of a Committee on Nomination.

Treasurer's report.

New business.

Eleven a. m. (Or at the conclusion of the business meeting.) Open session for reading of papers.

Topic for discussion: "Some Problems Pertaining to the Medico Social Relations of the Dependents, Defectives and Delinquents."

I. Preliminary—1. "Charity Organization."—The president's address, George M. Gould, Philadelphia.

2. "The Retrogressives, what Produces them; Classification," Bayard Holmes, Chicago.

3. "The Importance of the Study of this Subject to the Profession," Charles McIntire; Easton, Pa.

II. The Dependents—4. "The Relation of Food Adulterations to the Dependent Classes," Henry Leffmann, Philadelphia.

5. "The Provident Dispensary in England." H. Webster Jones, London.

III. The Defectives—6. "The Blind," J. A. Spalding, Portland, Me.

7. "Assistance and Care for the Blind," Charles A. Oliver, Philadelphia.

8. "Prevention of Blindness," Benjamin Lee, Philadelphia.

9. "The Present Status of Legislation for the Prevention of Blindness from Infantile Ophthalmia," Lucien Howe, Buffalo.

10. "What agencies Conspire to Check Development in the Minds of Children," J. Madison Taylor, Philadelphia.

11. "Prevention of Insanity," Gershom H. Hill, Independence, Ia.

12. Senile Dementia and Testimentary Capacity," J. N. Whittaker, Cincinnati.

13. The Medical Service of the United States Pension Bureau," P. S. Conner, Cincinnati.

IV. The Dilinquents—14. "Physical training as a Reformative Agent," Helen C. Putnam, Providence, R. I.

RECESS.

Wednesday evening, 8.20—The "Reunion Session." Under the direction of the Committee of Arrangements.

Thursday, August 30th.—10 a. m. business meeting. Open only to the Fellows of the Academy.

Unfinished business.

Reports of committees.

New business.

At the conclusion of the business session the reading of papers will be resumed.

V. Miscellaneous— 1. "The Evolution of Surgery," George D. Hopkins, Brooklyn.

2. "Government Commission Instead of State License," J. D. Kelly, Providence, R. I.

3 "Report of the Committee on the Comparative Value of Academic Degrees.

4. The Qualification of a Physician," J. M. Myer, Danville, Ky.

5. "The Work of our Academy," Robert Lowery Sibbet, Carlisle, Pa.

6. "And to Every Man His Work," Frederic H. Gerrish, Portland, Me.

Installation of the president-elect.

Appointment of additional member of council.

Unfinished Business.

Adjournment.

MEMORANDA.

In order to permit a full discussion of the topics presented, the authors of papers have been requested to limit their reading to twenty minutes, regulating details to foot notes or appendices; in order to have an interesting discussion, the committee on program will move that the time of each speaker be limited to five minutes.

There will be a meeting of the Council at the "Waumbek" on Tuesday evening August 28th, at which time the applications for membership will be examined in order that they may be reported to the Academy. It will facilitate their labors if the applications are sent in early to the secretary.